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A-E CONSTRUCTION SPECIFICATION

PROJECT FILE NO. 021052

OU 7-10 GLOVEBOX EXCAVATOR METHOD PROJECT

Facility Structures

Prepared for:
U.S. Department of Energy
Idaho Operations Office
Idaho Falls, Idaho

Idaho National Engineering and Environmental Laboratory

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DOCUMENT MANAGEMENT CONTROL SYSTEM (DMCS)
DOCUMENT APPROVAL SHEET

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Steven A. Davies, P. E.	A	5/10/02	WAG 7/10 Project - 31E0 Project Engineer
Scott A. Jensen, P. E.	R	5/8/2002	WAG 7/10 Project - 31E0 Structural Design Lead Engineer
Patrick W. Bragassa, P. E.	R	5/9/02	Design Engineering - 6770 Independent Peer Reviewer
Stephanie L. Austad, P. E.	R	5/9/02	Design Engineering - 6770 Engineering Group Supervisor Reviewer
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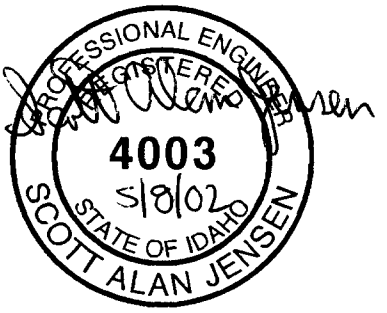

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SECTION 01005--SUMMARY OF WORK

PART 1--GENERAL

SUMMARY:

The Subcontractor shall furnish labor, material, equipment, and supplies (except Government-furnished materials and/or equipment) and perform work and operations necessary to construct the OU 7-10 Glovebox Excavator Method Facility Structures complete, in accordance with the subcontract drawings and these specifications.

Work Includes, but is not limited to:

1. Incidental earthwork as necessary for erection of the included structures and as shown on the drawings for installation of the shoring box.
2. Structural steel erection for the Facility Floor Structure (FFS) as shown on the drawings.
3. Steel decking and floor plate installation for the FFS as shown on the drawings.
4. Erection of the Government furnished (GFE) Retrieval Confinement Structure (RCS) and the (GFE) Weather Enclosure Structure (WES).
5. Installation of doors, windows, snow shields, or other components of the RCS or WES.
6. Miscellaneous other work as indicated on the drawings or as necessary for erection of the other structures.

REFERENCES:

The following documents, including others referenced therein, form part of this Section to the extent designated herein.

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910	OSHA Occupational Safety and Health Standards
29 CFR 1926	OSHA Health and Safety Standards for Construction

BECHTEL BWXT, IDAHO (BBWI)

Subcontractor Requirements Manual

Unless otherwise specified, references in these specifications or on the subcontract drawings to other specifications, codes, standards or manuals that are part of these specifications, but not included herein, shall be the latest edition, including any amendments and revisions, in effect as of the date of this Specification.

SUBMITTALS:

Submittals include, but are not limited to the following:

Hazardous Chemicals and Substances: Subcontractor shall submit a list of hazardous chemicals and substances in accordance with General Conditions Article 13 for mandatory approval. Chemicals and substances not previously approved for use will require the submittal of MSDS for mandatory approval.

See Section 01300, Submittals and the Vendor Data Schedule for additional submittal requirements.

QUALITY ASSURANCE:

Quality Assurance Program requirements shall exist to assure that work performed is in conformance with the requirements established by the drawings and this specification. QA Program criteria applicable to this scope of work is addressed in SC-5 of the Special Conditions and these specifications.

Standard Products: The materials and equipment furnished by the Subcontractor shall be standard products of manufacturers regularly engaged in the production of the type of materials and equipment required and shall be of the manufacturer's latest standard designs. Where two or more units of the same type and class of material or equipment are required, the units shall be the product of the same manufacturer, and shall be identical insofar as possible. The component parts of a unit of equipment need not be the products of the manufacturer.

SAFETY, HEALTH AND ENVIRONMENT:

In general work shall be in compliance with the applicable sections of 29 CFR 1910, 29 CFR 1926 and the BBWI Subcontractor Requirements Manual.

DELIVERY, STORAGE AND HANDLING:

All materials normally packaged shall be delivered to the site in the original, unopened packages with labels intact. Upon arrival, the Subcontractor shall inspect the materials or equipment for damage.

Materials and equipment shall be stored and handled in accordance with the manufacturer's instructions. Protect construction materials, equipment, flange facings, threads, machined or painted, and other exposed finished surfaces from damage.

PART 2--PRODUCTS

MATERIALS:

New Materials and Equipment: Materials and equipment received by the Subcontractor in a damaged condition shall be repaired or replaced by the Subcontractor as directed by the Contractor. Materials and equipment damaged by the Subcontractor shall be repaired or replaced by the Subcontractor.

Approved Equal: Whenever a product is specified by using a proprietary name, the name of a manufacturer, or vendor, the specific item mentioned shall be understood as establishing type, function, dimension, and quality desired. Other manufacturer's products will be accepted, provided sufficient information is submitted to determine that products proposed are equivalent to those named.

Existing Materials, Equipment and Structures: Existing materials, equipment and structures, involved under this Subcontract shall be thoroughly inspected by the Subcontractor before starting any work. Any defects or damages, the repair of which are not covered under these specifications or subcontract drawings, shall be reported in writing to the Contractor by the Subcontractor. The Subcontractor shall place reinstalled operating equipment in an operating condition that is at least as good as it was at the time the Subcontractor started work.

Government Furnished Materials (GFE): Items shown on the subcontract documents as (GFE) are materials and/or equipment that is furnished by the Government to be installed by the Subcontractor. A complete and composite list of such material is attached to the Subcontract Specifications and is referred to as the Schedule "X" list.

Hazardous Chemicals and Substances: The Subcontractor shall comply with applicable requirements of 29 CFR 1926.59, Hazard Communication Standard.

PART 3--EXECUTION

CONSTRUCTION AND INSTALLATION:

General: Materials and equipment shall be erected or installed only by qualified personnel who are regularly engaged in the trades required to complete the work. The subcontract drawings show the general arrangement and space allocation of the equipment specified. It shall be the Subcontractor's responsibility to verify changes in conditions or rearrangements necessary because of substitutions for specified materials or equipment. Where rearrangements are necessary the Subcontractor shall, before construction or installation, prepare and submit drawings of the proposed rearrangement for approval.

Coordination of Work: Where new work and existing facilities are shown on the drawings, but are not located precisely by dimensions, the Subcontractor shall be responsible for proper location and clearances and for correcting discrepancies and interferences in the work that are a result of his operations. Work done by one trade that must be integrated with work of other trades shall be laid out with due regard to the work done, or to be done, by other trades;

particularly if the work done by one trade depends upon completion or proper installation of work done by other trades. The Subcontractor shall cooperate in coordinating his work with work being done by others if their work must be integrated with the Subcontractor's work. The Subcontractor shall notify the Contractor at least one week prior to starting of the date on which the Subcontractor proposes to proceed with the work.

Workmanship: Work shall be done in a skillful and workmanlike manner. No major cuts or holes, not shown on the drawings, shall be made without prior approval of the Contractor. After equipment is installed, exposed holes, cracks and other defects shall be neatly patched and the patched areas shall match the adjoining materials and finish.

REPAIR AND RESTORATION:

Materials and equipment repaired or replaced by the Subcontractor shall be subject to acceptance by the Contractor.

PROTECTION:

Construction materials, equipment, flange facings, threads, machined or painted, and other exposed finished surfaces shall be protected from damage during construction.

END OF SECTION 01005

SECTION 01300--SUBMITTALS

PART 1--GENERAL

SUMMARY:

This section specifies the administrative, technical and quality requirements for Vendor Data submittals. Vendor Data requirements are specified in individual specification sections or on the drawings, and tabularized on a Vendor Data Schedule. In the event of conflicting requirements, the submittal requirements prescribed in the individual specification section shall prevail.

The Subcontractor shall submit data, drawings, and other submittals specified. If the Contractor determines the Subcontractor's submittal to be incomplete or unacceptable, the Subcontractor shall make a complete and acceptable submittal to the Contractor by the second submission of a submittal item.

The Subcontractor shall be responsible for advising the Contractor of any submittal that may be delayed and which might, if further delayed, extend completion of the project.

Section Includes, but is not limited to: The preparation, transmittal and delivery of documents by the Subcontractor to the Contractor as required in the "Submittals" subdivision of the specification sections and as provided on the Vendor Data Schedule.

Related Sections: General Provisions, Subcontractor Requirements Manual, Special Conditions, Drawings, Vendor Data Schedule, and other sections of these specifications apply to this section.

REFERENCES:

The following documents, including others referenced therein, form part of this Section to the extent designated herein:

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Y14.1 Drawing Sheet Size and Format

SUBMITTALS:

General Procedures: Vendor data, whether prepared by the Subcontractor or Subcontractor's subtier or supplier, shall be submitted as instruments of the Subcontractor. Therefore, prior to submittal, the Subcontractor shall ascertain that material and equipment covered by the submittal and the contents of the submittal itself, meet all the requirements of the subcontract specifications, drawings, or other subcontract documents.

Each submittal shall contain identification for each separable and separate piece of material or equipment, and literature with respect to the information provided in the specification and on the Vendor Data Schedule. Submittals shall be numbered consecutively for each different submittal.

Vendor Data Schedule: Vendor Data required by the specification sections or the drawings to support design, construction, and operation of the project is identified on a Vendor Data Schedule. The Vendor Data Schedule provides a tabular listing by item number, drawing or specification reference, and description of the item or service. The type of submittal is identified by a "Vendor Data Code", and the time required to submit the item is identified by a "When to Submit" code. An "Approval" code specifies whether the submittal is for Mandatory Approval or for Information Only. One copy of routine paper or electronic file submittals are required; additional copies may be required by the Vendor Data Schedule. Electronic file submittals are preferred. Submittals that cannot be scanned or provided electronically, such as material samples, will require 6 copies for Mandatory Approval and 4 copies for Information Only.

Or Equal Material or Equipment Submittals: All "or equal" materials, equipment or systems shall be identified and submitted for approval as required by the Subcontractor Requirements Manual.

An "or equal" submittal shall contain as a minimum all operating and physical parameters necessary to show that the material or equipment is equivalent to the specified material or equipment. All parameters shall be specifically identified by the submitter in the proposal. Exceptions or differences between the specified item and the "or equal" item shall also be identified.

If an "or equal" material, equipment or system is approved, the Subcontractor shall be responsible for backup material necessary to include the material, equipment or system in the technical documents. In most cases this includes "red lining" a set of design drawings, and specifications to provide an "Approved for Construction" set of specifications and design drawings which incorporate the changes caused by the "or equal" item. These "red line" drawings shall be submitted prior to use of the "or equal" item. Any calculations or other backup material necessary to show that changes are adequate shall be included with the "red line" drawings and specifications.

Construction Vendor Data Transmittal and Disposition Form: All vendor data shall be submitted to the Contractor using the Construction Vendor Data Transmittal and Disposition Form. The form provides the Subcontractor a convenient method to submit vendor data and provides the Contractor a means to disposition the submittal. The Subcontractor shall list the Vendor Data Schedule item number, a Vendor Data Transmittal tracking number (if applicable), the drawing or specification number reference, a Tag Number (if applicable), the submittal status (e.g., Mandatory Approval, Information Only, Re-submittal, or Or-equal), the

Revision Level, and the item Description. The description should include the heat or lot number for items requiring Certified Mill Test Reports.

Disposition by the Contractor: The Contractor's comments and required action by the Subcontractor will be indicated by a disposition code on the submittal. The disposition codes will be classed as follows:

(A) "Work May Proceed." Submittals so noted will generally be classed as data that appears to be satisfactory without corrections.

(B) "Work May Proceed with Comments Incorporated. Revise Affected Sections and Resubmit." This category will cover data that, with the correction of comments noted or marked on the submittal, appear to be satisfactory and require no further review by the Contractor prior to construction.

(C) "Work May NOT Proceed. Revise and Resubmit." Submittals so dispositioned will require a corrected resubmittal for one of the following reasons:
1) Submittal requires corrections, per comments, prior to final review.
2) Submittal data incomplete and requires more detailed information prior to final review.
3) Submittal data does not meet Subcontract document requirements.

(D) "Accepted for Use. Information Only Submittal." Submittals so dispositioned will generally be classified as Information Only for as-specified material and equipment.

Mandatory Approval coded vendor data will be reviewed by the Contractor and receive an A, B, or C disposition. Information Only submittals without comments will receive a D disposition. A, B, and C coded dispositioned submittals will be returned to the Subcontractor. D dispositioned submittals will not be returned to the Subcontractor. The Contractor may provide internal review of Information Only submittals. In the event that comments are generated on an Information Only submittal, the submittal may be dispositioned B or C and returned to the Subcontractor for appropriate action. Acknowledgment of receipt of dispositioned vendor data by the Subcontractor will not be required.

The Contractor will return dispositioned submittals with reasonable promptness. The Subcontractor shall note that a prompt review is dependent on timely and complete submittals in strict accordance with these instructions.

PART 2--PRODUCTS (SUBMITTAL REQUIREMENTS)

CERTIFIED MILL TEST REPORTS:

Where specifically required by other sections, certified mill test reports (CMTRs) shall be provided. The CMTRs shall be issued from the manufacturer who actively produces the item(s) and/or material to which the CMTR applies or a certified test laboratory. Each CMTR shall include the following:

1. Applicable codes and standards (such as ASTM or ASME) for the item(s) and/or material to which the CMTR applies.
2. General description of the item(s) and/or material to which the CMTR applies.
3. Heat or lot number of the item(s) and/or material to which the CMTR applies.
4. Actual chemical composition and the physical characteristics of the item(s) and/or material to which the CMTR applies. The physical characteristics noted shall include ultimate tensile strength, yield strength and elongation as a minimum. Reporting of physical characteristics is not required in the case of weld filler material unless otherwise noted in the applicable specification subdivision.
5. Signature and organizational title of the individual authorized to certify the accuracy of the data indicated on the CMTR for the item(s) and/or material shown.

INSPECTION AND TEST PROCEDURES:

Where specifically required by other sections, inspection and test procedures shall be provided. Inspection and test procedures shall include, as applicable: description of item or items involved, inspection or testing to be performed, a listing of testing agency and technical personnel to be used, description of equipment and facilities to be used, test prerequisites, test methods, test evaluation and acceptance criteria, safety precautions, sign-off requirements, methods for control and calibration of measuring and test equipment, proposed test record form, references to applicable portions of the subcontract documents, and detailed procedures, methods, and criteria for evaluation and acceptance. Test procedures shall be prepared in accordance with the Subcontract Requirements Manual, PRD-5014 "Test Control".

INSPECTION AND TEST REPORTS:

Where specifically required by other sections, inspection and test reports shall be provided within 10 working days of such inspection or test. Inspection and test reports shall include, as applicable: identification of material or item inspected, inspection data, functional test data, date(s) and place(s) of inspection/tests, names of agencies and technicians involved, references to procedures and methods used, references to applicable portions of the subcontract documents, names of persons evaluating test results, identification of work failing to meet inspection/test acceptance criteria, and detailed description of corrective action taken. Test reports shall be provided in accordance with the Subcontract Requirements Manual, PRD-5014 "Test Control".

INSTALLATION, APPLICATION, AND ERECTION INSTRUCTIONS:

Installation, application, and erection instructions shall be provided where specifically required by other sections. Installation, application, and erection instructions shall be clear, concise, and detailed, and shall utilize drawings and pictures to the extent necessary. The instructions shall include procedures for delivery acceptance, unpacking, inspection, re-packing, storage, handling, preparation of supporting work, assembly, and incorporation of the material/equipment into the work. The instructions shall include sequences, precautions, and tolerances.

In general, the Contractor's Representative will inspect the work to the criteria and instructions prescribed in the manufacturer's installation, application and erection instructions. The Subcontractor shall not deviate from the written instructions without prior written approval and direction from the manufacturer; such approval and direction shall be submitted to the Contractor as an attachment to the manufacturer's installation, application and erection instructions.

PRODUCT DATA:

Where specifically required by other sections, product data shall be provided. Product data shall include descriptive material, such as catalog data, diagrams, color charts, and other data published by the manufacturer, as well as evidence of compliance with safety and performance standards. To demonstrate conformance to the specified requirements; catalog numbers alone will not be acceptable. The data shall include the name and address of the nearest service and maintenance organization that regularly stocks repair parts.

Product data submittals shall reference the applicable subdivision and drawings, and be complete for each item or unit of work.

SAMPLES:

Where specifically required by other sections, samples shall be provided. Samples shall be identical with final condition of materials or products proposed for the work. Two full sets of optional samples shall be provided when required. Information shall be provided with each sample to show generic description, source or product name and manufacturer, limitations, and compliance with standards. If requested by the Subcontractor, one sample set may be returned to be incorporated in the work. If incorporated into the work such sample shall be labeled in an approved manner and the installed location recorded on "Redline" drawings.

SHOP DRAWINGS:

"Redline" Drawings: Copies of the shop drawings shall be updated to include all changes or modifications made during construction and to reflect the actual conditions of construction. Each drawing shall be marked "As-Built" and be signed by the Subcontractor representative and shall be suitable for XEROX copying or microfilming.

SPECIAL PACKAGING, HANDLING, OR STORAGE PROCEDURES:

Where specifically required by other sections, special packaging, handling, rigging, shipping, storage, or preservation procedures shall be provided. These procedures shall contain the following minimum requirements as applicable:

1. Measures taken to prevent damage during transit.
2. Detailed description of container design.
3. Overall dimensions and approximate weight of container and contents.
4. Recommended method for off-loading.
5. List of required special off-loading devices.
6. Special instruction for proper packaging and preventative maintenance during storage at the site.
7. Special instructions for marking.
8. Safety code labels, if applicable.

PART 3--EXECUTION (NOT APPLICABLE)

END OF SECTION

SECTION 02200--EARTHWORK

PART 1--GENERAL

SUMMARY:

Section Includes, but is not limited to:

1. Excavating all materials encountered, of every description, for completion of the Subcontract as shown on the drawings and as specified herein.
2. Backfilling of the excavation for the shoring box and other excavations necessary for completion of the work.
3. Adjustments to the existing gravel base to accommodate installation of connection plates and bolts.
4. Adjustments to the existing gravel base necessary to provide uniform bearing for the main structural beams.
5. Completion of the gravel access ramp adjacent to the FFS.

REFERENCES:

The following documents, including others referenced therein, form part of this Section to the extent designated herein.

CODE OF FEDERAL REGULATIONS

29 CFR 1926 OSHA Safety and Health Regulations for Construction, Subpart P

SUBMITTALS:

No Vendor Data required for this section.

PART 2--PRODUCTS

MATERIALS:

Backfill Material: Use existing excavated material unless otherwise directed by the Contractor's Representative.

PART 3--EXECUTION

EXCAVATION:

Earth Excavation: Earth excavation includes removal and temporary storage of soil material of any classification, and other materials encountered that are not classified as unauthorized excavation.

Unauthorized Excavation: Unauthorized excavation consists of removal of materials beyond indicated elevations or dimensions without specific direction by the Contractor. Unauthorized excavation, as well as remedial work directed by the Contractor, shall be at the Subcontractor's expense.

Trenches: Trenches shall be of sufficient width to provide adequate room for workmen to perform any necessary service to the materials or items being installed therein and to permit proper compaction of the backfill.

Stockpiling and Disposal: Excavated material that is required for backfilling, shall be piled in an orderly manner a sufficient distance from the edge of the excavation, but in no case closer than 2 ft, and so located that it will not interfere with future construction. Excavated materials to be used for backfill shall be kept free from vegetation and other objectionable materials. Excavated materials not required or not approved for backfilling, grading shall be disposed of. Unused excavated earth materials shall be hauled to areas designated by the Contractor and disposed of in a manner specified in the Special Conditions.

Unstable Soils: If wet or otherwise unsatisfactory soil is encountered in an excavation, at or below the excavation line, it shall be brought to the attention of the Contractor and removed as directed in accordance with Article 38, "Differing Site Conditions", of the General Provisions.

Control of Water: All excavations shall be kept free of standing water. The Subcontractor shall furnish, install and operate the equipment required to keep excavations free from water at all times. Water shall be disposed of in a manner that will not cause injury to property.

BACKFILL OR FILL:

General: The excavations shall be cleared of all trash and debris prior to backfilling or filling. All backfill or fill material shall be free from trash, organic matter and frozen particles. Backfilling or filling shall be done only when approved by the Contractor.

Under Structures: Backfill or fill materials under structures shall be fill material as specified in the "Materials" section.

Placement: Concentrated dumping of backfill or fill material into excavations will not be permitted. No water shall be used for placing, settling or compacting backfill or fill except to for dust reduction. All material must be placed in uniform layers not to exceed 12 in. loose measurement. Care shall be taken when backfilling, filling, around any buried items to prevent injury to the item being covered.

Compaction: Unless otherwise indicated on the drawings or specifications, compact all backfill and fill material. No heavy equipment shall be allowed within 5 ft of a structure.

FIELD QUALITY CONTROL:

Surveillance will be performed by the Contractor's Representative to verify compliance of the work to the drawings and specifications.

END OF SECTION 02200

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SECTION 02598--GEOMEMBRANE LINER

PART 1--GENERAL

SUMMARY:

The Subcontractor shall supply all labor and materials required to provide a reinforced geomembrane liner and non-woven geotextile complete and in accordance with the drawings and specifications.

Section Includes, but is not limited to:

Furnish and install flexible membrane lining and non-woven geotextile as shown on the drawings and this specification.

REFERENCES:

The following documents, including others referenced therein, form part of this Section to the extent designated herein:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM testing standards as referenced herein.

SUBMITTALS:

Submittals include but are not limited to the following:

Quality Control Plan: Submit a quality control plan for fabrication and installation for approval.

Installation and Shop Drawings: Submit drawings and product data showing proposed panel layout including field seams. Details shall be included to show the termination of the panels connecting with the shoring along the inner perimeter.

Certification: Submit certification that the material supplied meets the Materials requirements.

Test Reports: Submit test procedures and reports for liner fabrication and seam inspection.

Qualifications: Submit certification of personnel performing fabrication and installation of the fabric. Submit the names of the projects and references, which document the Subcontractor's qualifications.

See Section 01300, Submittals and Vendor Data Schedule for additional submittal requirements.

QUALITY CONTROL:

The installation Subcontractor shall be approved by the manufacturer of the liner materials. A representative of the company furnishing the liners shall be present during the entire installation procedure and shall provide technical assistance for the installation of the lining.

The Subcontractor shall be an established firm regularly engaged in manufacturing and installing liner systems for the past 5 years.

The Subcontractor shall provide documentation of an approved Subcontractor Quality Control Plan for the fabrication and installation of the flexible membrane liner system.

Documentation shall be submitted with the liner certifying compliance with the Materials section of this specification.

DELIVERY, STORAGE AND HANDLING:

Delivery, storage and handling of the materials shall conform to the manufacturer's recommendations and shall be done in such a manner as to prevent damage to any part of the work.

Receiving Inspection

When lining roll goods are received from the manufacturer, the rolls shall be inspected to assure rolls have not been visibly damaged during transit.

PROJECT/SITE CONDITIONS:

The site is located at the Idaho National Engineering and Environmental Laboratory in southeast Idaho. The mean temperature at this location is 42° F, with a summer high of 100° F, and a winter low of -40° F.

The highest recorded winds are 85 mph.

PART 2—PRODUCTS

MATERIALS:

Prior to the flexible membrane liner installation, a non-woven geotextile shall be installed to protect the liner from the subgrade. The non-woven geotextile shall meet the minimum physical requirements indicated in Table 1 below.

Table-1 Minimum Geotextile Physical Properties

Typical Properties	**Test Method**	**Roll Value***	**Requirements**
Grab Tensile Strength	ASTM D4632	MARV	200 lbs
Grab Elongation	ASTM D4632	MARV	50% MARV
Puncture Strength	ASTM D4833	MARV	130 lbs
Mullen Burst	ASTM D3786	MARV	400 psi
Trapezoidal Tear	ASTM D4533	MARV	85 lbs
Apparent Opening Size	ASTM D4751	MARV	80 US Std Sieve
Permeability	ASTM D4491	MARV	0.38m/sec
Water Flow Rate	ASTM D4491	MARV	110pm/ft^2
UV Resistance (% retained after 500 hours)	ASTM D4355	MARV	70%

* "MARV" indicates minimum average roll values; calculated as the mean minus two standard deviations, yielding a 95% confidence level.

The flexible membrane lining material shall be Reinforced 8130 XR-5 as manufactured by Seaman Corporation, (1000 Venture Boulevard, Wooster, Ohio 44691; 330-262-1111), with the minimum physical requirements indicated in the Physical Properties table (Table 2).

Table-2 Minimum Flexible Membrane Liner Physical Properties

Typical Properties	**Test Method**	**Requirements**
Thickness-minimum average value	ASTM D751	30 mils
Base Fabric Weight (nominal)	ASTM D 3776	6.5 oz/yd^2
Weight	ASTM D 751	30.0 ± 2 oz/yd^2
Tear Strength	ASTM D 4533, Trapezoid Tear	35/35 lb_f min.
Breaking Strength	ASTM D 751, Grab Tensile	550/550 lb_f min.
Low Temperature	ASTM D 2136, 4hr – 1/8" mandrel	Pass @ -30° F
Dimensional Stability	ASTM D 1204, 212° F – 1hr	1.5% max. each direction
Adhesion – Heat Sealed Seam	ASTM D 751, Dielectric Weld	35 lb_f/2in min.
Bursting Strength	ASTM D 751, Ball Tip	650 lb_f min. 800 lb_f typical
Dead Load – Seam Shear Strength	ASTM D 751	2 in seam, 4hr, 1 in strip 210 lb_f @ 70° F

		105 lb_f @ 160° F
Hydrostatic Resistance	ASTM D 751, Method A	800 psi min.
Adhesion – Ply	ASTM D 413	15 lb_f min. or Film Tearing Bond
Bonded Seam Strength	ASTM D 751 as modified by NSF 54	550 lb_f min.
Puncture Resistance	ASTM D 4833	250 lb_f min.
Weathering Resistance	ASTM G 23 (Carbon-Arc)	8,000 hrs (min.) – No appreciable changes

The sheeting shall be a flexible, durable, watertight product free of pinholes, blisters, holes and contaminants.

FABRICATION:

In order to minimize field-seaming requirements during installation, individual 8130 XR-5 liner widths shall be factory fabricated into custom designed sheets, to the extent possible. Factory panels will be fabricated with thermal or radio frequency (RF) welding. A 12-inch cross-sectional panel retainer shall be removed from each production run. This will be used for factory and field seam testing.

After the panel retains are cut, samples shall be tested for bonded seam strength (stress strength) and peal adhesion. All seam strength test reports shall be furnished to the Contractor.

PART 3--EXECUTION:

SUBGRADE PREPARATION:

The geotextile and lining installation shall not begin until after a proper base has been prepared to accept the membrane. The base material shall be smooth and free from sharp objects that could puncture the lining. Any cracks or voids shall be filled.

The subgrade surface shall be made uniform. Abrupt changes in elevation of the prepared surface is to be avoided.

Acceptance of the subgrade surface by the Contractor is required before proceeding with the installation of the liner. This acceptance will be limited to the amount of area that may be lined during a particular work shift. Direction and control of any subsequent repairs to the subgrade, including the subgrade surface, shall remain the responsibility of the Subcontractor.

INSTALLATION

The non-woven geotextile and flexible membrane liner shall be applied as shown in the drawings and as recommended by he manufacture's specifications.

Non-woven Geotextile Installation: The geotextile shall be installed by overlapping each panel a minimum of 4 inches.

Flexible Membrane Placement and Seaming: The flexible membrane liner shall be placed over the prepared surface and geotextile as shown in the drawings, in such a manner as to assure minimum handling.

The liner shall be installed in relaxed condition, free of stress or tension upon completion of the installation. Stretching the liner to fit is not permissible. Sufficient material (slack) shall be provided, to allow for expansion and contraction. In areas that high wind is prevalent, the lining installation should begin on the upwind side of the project and proceed downwind. The leading edge of the liner shall be secured at all times with sandbags.

Lap joints shall be used to seal factory-fabricated panels together in the field. Contact surfaces of the two sheets shall be wiped clean to remove all dirt, dust, moisture or other foreign materials. Field seams shall be made under the direction of the manufacturer.

The liner shall be attached to the shoring with a neoprene gasket and a steel strap.

Trial Welds: Trial welds shall be performed on samples to verify welding equipment operations and performance of seaming methods and conditions. A minimum of two trial welds shall be performed per day or shift per welding apparatus, one made prior to the start of the work and one completed mid shift. Welds shall be made under the same surface and environmental conditions as the production welds (ie., in contact with geomembrane subsurface and similar ambient temperatures).

Field Welding: A two-inch overlap seam shall be made by hot air or hot wedge welding. The surface of the welded areas must be dry and clean. Pressure must be applied to the full width of the seam on the top and bottom surface while the welded area is still in a met-type condition. The bottom welding surface must be flat to insure that the entire seam is welded properly. Enough heat shall be applied in the welding process that a visible bead is extruded from both edges being welded. The bead insures that the materials is in a melt condition and successful chemical bond between the two surfaces is accomplished.

Seams shall be welded only when ambient temperatures are between 32° F and 110° F as measured six inches above the geomembrane surface. However, temperature is of less concern to good seam quality than is moisture. For cold weather seaming, it is advisable to preheat the sheets with a radiant heater, or a hot air blower, or to use a tent in order to determine appropriate seaming conditions. No welding shall take place when it is snowing, sleeting, or raining.

Defects and Repairs: The geomembrane shall be examined for defects, holes, blisters, undispersed raw materials, and any sign of contamination by foreign matter. The geomembrane surface shall be clean at the time of examination. Each suspect location shall be repaired and non-destructively tested.

Damaged geomembrane shall be removed and replaced with the same membrane type if damage cannot be satisfactorily repaired. Any portion of the geomembrane exhibiting a flaw or failing a non-destructive test shall be repaired. The patch material shall have rounded corners and extend a minimum of four inches in each direction from the damaged area.

FIELD QUALITY CONTROL

Inspection: After welding, a close visual inspection of the seams shall be made. This is to be done as soon as possible after the weld has been completed. The inspection is to include weld alignment. Defective areas shall be marked and repaired. This inspection/repair process is to be carried out in a systematic manner as soon as possible to ensure that no defective area goes unrepaired.

All field seams shall be tested using the Air Lance Method. A compressed air source shall deliver a minimum of 55 psi to a 3/16 inch nozzle. The nozzle shall be directed to the lip of the field seam in a near perpendicular direction to the length of the field seam. The nozzle shall be held 4 inches maximum from the seam and travel at a rate not to exceed 40 feet per minute. Any loose flaps of 1/8" or greater will require repair.

All field seams shall also be inspected utilizing the Vacuum Box Technique as described in Standard Practice for Geomembrane Seam Evaluation by Vacuum Chamber (ASTM D5641-94) using a 3 to 5 psi vacuum pressure. All leaks shall be repaired and tested.

Destructive Seam Strength Testing: Destructive testing shall not be permitted.

Surveillance will be performed by the Contractor's Representative to verify compliance of the work to the drawings and specifications.

END OF SECTION 02598

SECTION 05060--STRUCTURAL WELDING

PART 1--GENERAL

SUMMARY:

Section Includes, but is not limited to:

1. All structural field welding on carbon steel, and stainless steel.
2. Filler metal for the welding is not GFE and is therefore part of the scope of this section.

Related Sections: 05100 Structural Steel and Miscellaneous Metals
05101 Stainless Structural Steel

REFERENCES:

The following documents, including others referenced therein, form part of this Section to the extent designated herein.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

AISC (ASD)	Specification for Structural Steel Buildings-Allowable Stress Design (ASD) and Plastic Design

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z49.1	Safety in Welding and Cutting

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)

ASNT SNT-TC-1A	Personnel Qualifications and Certification in Nondestructive Testing

AMERICAN WELDING SOCIETY (AWS)

AWS A2.4	Symbols for Welding and Nondestructive Testing
AWS A3.0	Welding Terms and Definitions
AWS B2.1	Specification for Welding Procedure and Performance Qualification
AWS D1.1	Structural Welding Code - Steel
AWS D1.6	Structural Welding Code – Stainless Steel
AWS QC1	AWS Standard for Qualification and Certification of Welding Inspectors

AMERICAN SOCIETY FOR MECHANICAL ENGINEERS (ASME)

ASME Sect. V Boiler and Pressure Vessel Code (Nondestructive Examination)

IDAHO NATIONAL ENGINEERING AND ENVIROMENTAL LABORATORY (INEEL)

INEEL Welding Manual.

DEFINITIONS AND SYMBOLS:

Definitions for welding terms shall be in accordance with AWS A3.0 and weld symbols shall be in accordance with AWS A2.4, unless otherwise indicated.

SUBMITTALS:

Submittals include, but are not limited to the following:

1. Cleaning procedures for stainless steel.
2. Subcontractor's procedures for identification and control of tools and equipment.
3. Welding procedure specifications and procedure qualification records. These procedures shall be referenced on the shop drawings, and erection drawings as applicable.
4. Welding personnel qualification records.
5. Subcontractor's nondestructive examination procedures.
6. Subcontractor's nondestructive examination personnel qualification records.
7. Procedures for the handling, storage, and control of filler and backing materials.
8. Filler metal manufacturer or independent testing lab certified mill test reports (CMTR) of actual chemical properties and heat number identification for stainless steel filler metals. Typical chemical properties are required for carbon steel filler metals.
9. The heat number shall be marked on the CMTR for stainless filler metals. The CMTR shall certify that the material has been inspected and tested in accordance with the requirements of the specification and that the results of the chemical analysis meet the requirements of the specification for the AWS material classification.
10. Weld histories including requirements in Special Conditions such as reports of each inspection, examination and test.
11. Detailed weld repair procedures.
12. Weld repair reports including weld identification, welder identification number, test procedure, reason for rejection, number of repairs required, and documentation that weld is repaired and accepted.

13. Erection drawings showing all welds. All necessary information such as location, size, weld preparation, etc., shall be shown. The weld procedures and filler material to be used shall be indicated.

See Section 01300, Submittals and the Vendor Data Schedule for additional submittal requirements.

QUALITY CONTROL:

Codes and Standards Regulatory Requirements (Codes and Standards): Comply with provisions of the following codes and standards, unless otherwise specified herein:

AISC ASD Specification
AWS D1.1
AWS D1.6

General: Components with welds will not be accepted unless the welding has been specified or indicated in the design documents or otherwise approved. Welding shall be as specified in this Section except where additional requirements are indicated or are specified in other sections.

Weld Procedure Qualification: Welding procedures from the INEEL Welding Manual listed in PART 3 Welding Processes paragraph shall be used for on-site welding.

Welder Qualification: All on-site welding performed under this specification shall be performed by welders or welding operators qualified at the INEEL Welder Test Facility using the applicable procedures specified from the INEEL Welding Manual.

Certification: Upon successful completion of the qualification test, the welder shall be provided with a certificate card in compliance with the INEEL Welding Manual (on-site). The certificate shall state the welding process, codes, and procedures under which the welder is qualified, and individual who issued the certificate. The welder shall carry the certificate card when performing welding under this subcontract. The Subcontractor shall have on file documentation, affidavits, and records of testing and test results that qualified the welder for certification. These records shall be certified by the Subcontractor and shall be submitted to the Contractor as vendor data.

Renewal of Qualification: Renewal of qualification for a welder or welding operator working on-site shall be in accordance with the INEEL Welding Manual.

Nondestructive Examination Procedures: Inspection procedures and acceptance criteria for each nondestructive examination required in accordance with the requirements specified in PART 3--EXECUTION - SOURCE AND FIELD QUALITY CONTROL and additionally as required to ensure conformance of the work to the subcontract requirements.

Nondestructive Examination Personnel Qualifications: The nondestructive examination (including visual examination) personnel shall be qualified for the applicable nondestructive testing method in accordance with the requirements of ASNT SNT-TC-1A for Levels I, II, or III as applicable. Qualification as an AWS Certified Weld Inspector is an acceptable alternative for visual examination.

DELIVERY, STORAGE, AND HANDLING:

Except as otherwise specified, filler materials, backing materials, and fluxes shall be stored, handled and controlled in accordance with approved procedures. As a minimum the procedures shall include manufacturer's recommendations and the requirements of the INEEL Welding Manual Volume 2.

SAFETY:

As a minimum, safety precautions during welding shall conform to ANSI Z49.1 as well as any additional requirements specified in the subcontract documents.

PART 2--PRODUCTS

GENERAL:

Welding equipment, electrodes, filler material, and fluxes shall be capable of producing satisfactory welds when used by a qualified welder or welding operator utilizing qualified welding procedures.

MATERIALS:

Filler Material: All filler material used in fabrication shall comply with the applicable requirements of AWS D1.1 or D1.6 as applicable and have an actual certified material test report (CMTR) for stainless metals or an typical CMTR for carbon steel metals, issued by the original manufacturer or independent testing laboratory performing material testing.

Straight lengths of bare filler metal shall be marked on each end with heat number and AWS material classification. Spools of bare filler metal shall be marked on the side of the spool with the heat number and AWS material classification.

Gases: Shielding and purge gas(es) shall be in accordance with the applicable weld procedure.

PART 3--EXECUTION

WELDING OPERATIONS:

Both off-site and on-site welding shall be accomplished in accordance with specified code requirements and the qualified and approved welding procedure specifications using qualified welders and/or welding operators. The use of such procedures will not relieve the Subcontractor of his responsibility for producing weldments conforming to the specified workmanship requirements. Welding shall not be done when the quality of the completed weld could be impaired by the prevailing working or weather conditions.

Welding Processes:

On-Site Using INEEL Welding Manual:

Carbon Steel Tubular Sections, Plate and ASTM A36 Structural Shapes: INEEL Welding Procedures C-3.5.

Stainless Steel: INEEL Welding Procedures S-3.16.

Stainless Steel to Carbon Steel: INEEL Welding Procedure, CS-3.04.

Tools and Equipment: Tools and equipment used in the fabrication of stainless steel and nickel based alloys shall be free from corrosion and shall be maintained free of grease, carbon steel particles, or any other foreign matter detrimental to fabrication. Mechanical cleaning tools used for stainless steel shall not cause carbon steel to be embedded into the surface. Wire brush material shall be of a material compatible with the parent material. Grinding wheels shall be resin bonded. Metal removal tools, wire brushes, and grinding wheels shall not have been previously used for other than the parent material. The Subcontractor shall establish and maintain identification and control procedures for equipment and tools including wire brushes and grinding wheels.

Preparation of Base Metal: Surfaces within 2 in. of any weld location shall be free of any oil, grease, paint, or other material that would prevent proper welding or produce objectionable fumes while welding. If the joints of carbon steel are prepared by arc cutting, the surface shall be ground to bright metal by mechanical means before welding. Plasma arc or laser beam cutting of austenitic stainless steel is permitted provided the cut surface is machined or ground a minimum of 1/16 in. to bright metal.

Cleaning Stainless Steel: The weld joint and surrounding metal for at least 2 in. back from the joint preparation shall be cleaned before welding. Cleaning shall be accomplished by brushing with a clean stainless steel brush and by scrubbing with a clean lint free cloth moistened with an approved low (less than 35 ppm) chloride or chloride-free solvent. When the weld has cooled, remove all visible weld spatter, flux, arc-strikes, and scale, however, the base material thickness shall not be compromised. Stainless steels shall not be descaled with nitric-hydrofluoric acid solutions. Final cleaning shall be performed after inspection and when nondestructive testing is complete.

Preheat and Interpass Temperature Requirement: Preheat and interpass temperature shall be in accordance with the welding procedure specification.

Welding Requirements: Competed welds shall provide a surface that is free from cracks, seams, laps, lamination, and porosity in excess of the specified acceptance requirements. Arc strikes outside the area of permanent welds shall be avoided on base metal. Arc strikes shall be removed by grinding as described in cleaning paragraph.

Fillet Welds: Fillet welds shall be made to the size and length as indicated. Where length of welds is not specified, the weld shall be continuous for full length of joint. Where spacing of intermittent or staggered weld is shown, the spacing shall be considered maximum only.

Unless fillet sizes are indicated as maximum size, oversize welds shall not exceed the thickness of the thinner part joined. Fillet weld surface shall have a uniform transition from the joined material into the weld deposit. Undercut shall be limited to the requirement of AWS D1.1 or D1.6 as applicable and unfused overlap of the weld deposit shall be unacceptable.

Groove Welds: Groove welds shall be 100% complete joint penetration welds unless otherwise indicated. Groove welds shall be made to the requirements of the drawings and specification.

Stud Welds: Welds for studs and shear connectors shall be made with automatically timed stud welding equipment in accordance with AWS D1.1, Section 7.

Temporary Welds: Temporary welds shall be subject to the same welding procedure requirements as the final welds. Temporary welds shall be removed unless otherwise permitted by the Contractor. Surface of removed temporary welds shall be made flush with the original surface.

Backing Strips and Weld Runoff Plates: The use of backing strips and weld runoff plates is permitted on weldments. The backing strips and weld runoff plates shall be removed after welding, unless otherwise indicated. Surface of removed temporary welds shall be made flush with the original surface.

Weld Repairs: Defects shall be completely removed by grinding or other approved means to clean, sound metal. Excavated areas shall be or PT inspected by ASNT-TC-1A certified personnel to assure defect removal.

Repairs to correct weld defects shall be made using the same procedure used for the original weld or other previously authorized weld repair procedures.

Repaired areas shall be re-examined using the same inspection procedures by which the defect was originally detected and the inspection which was originally specified for the weld.

No more than two repair attempts will be allowed on any one weld:

Cutting out and rebeveling then rewelding is a considered a weld repair.

No further attempts to repair shall be carried out without the written authorization of the Contractor.

Weld repairs subsequent to the first two repair attempts shall be made after receiving written approval of Subcontractor's repair procedures.

Arc Strikes: Cracks and blemishes caused by arc strikes shall be ground to a smooth contour but no more than 1/32 in. of the base metal shall be removed. Arc strikes extending more than 1/32 in. into the base metal shall be considered as a weld defect and repaired as specified.

FIELD QUALITY CONTROL:

General: Components with welds will not be accepted unless the welding has been specified or indicated in the design documents or otherwise approved. Welding shall be as specified in this Section except where additional requirements are indicated or specified in other sections.

Inspections, examinations, and tests for welds and weldments shall be performed by qualified inspection, examination, and testing personnel in accordance with the approved procedures. All welds are subject to inspection by the Contractor's Representative who reserves the right to accept, reject or demand removal of welds which are in violation of this specification or the applicable welding procedure specification. The Subcontractor shall provide access for this activity.

Weld Testing and Inspection:

Visual Weld Inspection: All welds shall receive a visual (VT) examination. VT inspection shall be performed, evaluated and documented by the Contractor's Representative for on-site welds. Visual examination procedures shall be in accordance with AWS D1.1 or D1.6 as applicable. The evaluation of indications and the acceptance criteria shall be in accordance with AWS D1.1 or D1.6 as applicable.

Contractor Inspection: Surveillance will be performed by the Contractors Representative to verify compliance of the work to the drawings and specifications.

END OF SECTION 05060

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SECTION 05100--STRUCTURAL STEEL AND MISCELLANEOUS METALS

PART 1--GENERAL

SUMMARY:

The Subcontractor shall supply all labor, equipment, and materials required to construct items listed hereafter and as shown on the drawings. Most of the materials necessary for the work included in this section are GFE. A small amount of material such as shim plates may be required for leveling of structures or members include in the scope of this section.

Section Includes, but is not limited to:

1. Erection of GFE structural steel framing
2. Installation of GFE steel decking and floor plate
3. Erection of GFE supplied structural frames or modular panels

Related Sections: 05060 Structural Welding
05101 Stainless Structural Steel

REFERENCES:

The following documents including others referenced therein, form part of this Section to the extent designated herein.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

AISC	Code of Standard Practice for Steel Buildings and Bridges
AISC (ASD)	Specification for Structural Steel Buildings - Allowable Stress Design (ASD) and Plastic Design

RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS

RCSC	Specification for Structural Joints Using ASTM A325 or A490 bolts

STEEL DECK INSTITUTE (SDI)

SDI	Design Manual for Composite Decks, Form Decks and Roof Decks

SUBMITTALS:

Submittals include, but are not limited to the following:

Erection: Prior to erection, submit an erection plan of the structural steel framing. This erection plan shall conform to the requirements of AISC Code of Standard Practice. The erection plan shall describe all necessary temporary supports, including the sequence of installation and removal. Plan shall show sufficient detail and instructions to ensure the structure has been evaluated for stability throughout the subcontract.

The erection plan shall include erection or installation plans for structural steel, floor decking and floor plates.

Procedures: Submit procedures for tightening of "slip critical" bolts. The procedure shall include necessary materials, tightening methods, and inspection methods or criteria if direct tension indicator tightening is used.

See Section 05060 for welding submittals.

See Section 01300, Submittals and the Vendor Data Schedule for additional submittal requirements.

QUALITY CONTROL:

Qualification for Welding Work:

See Section 05060--Structural Welding

DELIVERY, STORAGE AND HANDLING:

Store material to permit easy access for inspection and identification. Protect members and materials from corrosion and deterioration.

Do not store materials in a manner that might cause distortion or damage to members or supporting structures. Repair or replace damaged materials that do not meet these specifications.

Store fasteners and small part or pieces such that material traceability is maintained.

PART 2--PRODUCTS

MATERIALS:

All materials are GFE except minor shimming materials. The following material requirements are included for information. If additional materials are required they shall comply with these requirements.

Structural Steel W Shapes: ASTM A 992, except where other type steel is indicated.

Structural Steel C, S, M, and HP Shapes: ASTM A 36, except where other type steel is indicated.

Miscellaneous Steel Plates, Angles and Bars: ASTM A 36, except where other type steel is indicated.

Cold-Formed Steel Tubing: ASTM A 500, Grade B.

Steel Pipe: ASTM A 53, Type E or S.

Shop Painting: Remove loose scale, heavy rust, and other foreign materials from fabricated joists and accessories before application of shop paint.

Steel Decking: Steel deck shall conform to ASTM A 611 (painted) grade as required by SDI Specifications. Deck units shall be fabricated of 0.0598 (16 gage) inch design thickness or thicker steel. Decking shall be Vulcraft 3.0 N or equal.

Unfinished Threaded Fasteners: ASTM A 307, Grade A, regular hexagon type, low carbon steel.

High-Strength Threaded Fasteners: Heavy hexagon structural bolts, heavy hexagon nuts, and hardened washers, as follows:

Quenched and tempered medium-carbon steel, bolts, nuts and washers, complying with ASTM A 325 Type 1.

Direct tension indicators shall conform to ASTM F959.

"Twist Off" type tension control structural bolt/nut/washer assemblies conforming to ASTM F1852.

Deck Fasteners: TEK Self-Drilling screws, hex head, size as indicated on the drawings.

Plate Fasteners: TEK Self-Drilling screws, Phillips flat head, size as indicated on the drawings or high-strength rivets as indicated on the drawings.

FABRICATION:

Not applicable to this subcontract.

PART 3--EXECUTION

ERECTION:

Surveys: Check elevations of bearing surfaces before erection work proceeds, and report discrepancies to the Contractor. Do not proceed with erection until corrections have been made or until compensating adjustments have been agreed upon with the Contractor. Supply shim plates or adjust earthwork elevations so as to provide level elevations for the FFS surface.

Temporary Shoring and Bracing: Provide temporary shoring and bracing members with connections of sufficient strength to bear imposed loads.

Field Assembly: Set structural steel accurately to lines and elevations indicated. Align and adjust various members before permanently fastening. Clean surfaces that will be in contact before assembly. Perform necessary adjustments to compensate for discrepancies in elevations and alignment. Level and plumb individual members of structure within specified AISC Code of Standard Practice tolerances.

Splice members only where indicated and accepted on shop drawings.

Comply with AISC ASD Specification and Code of Standard Practice for bearing, adequacy of temporary connections, alignment, and removal of paint on surfaces adjacent to field welds.

Field Connections: Do not use gas cutting in field for correcting fabrication errors in structural framing:

Bolted Connections: Install high strength threaded fasteners in accordance with "Specifications for Structural Joints Using ASTM A 325 or A 490 Bolts." "Slip critical" connections shall use "twist off" type tension control bolt/nut/washer assemblies unless noted otherwise on shop drawings.

Field Welding: Field welding shall be done in accordance with the AWS D1.1, the INEEL Welding Manual and applicable INEEL Welding Procedures Specifications, see Section 05060.

Metal Deck Installation:

General: Install deck units and accessories in accordance with manufacturer's recommendations and final shop drawings, as shown on the Subcontract drawings, and as specified herein. All fasteners shall be installed in accordance with the manufacturer's recommended procedure. The deck units shall be attached to supports as indicated on the design drawings.

Deck ends splices shall lap the greater of 12 inches or as recommended by the deck manufacturer.

FIELD QUALITY CONTROL:

Contractor Supplied Testing: The Contractor's Representative will inspect high-strength bolted connections and welded connections and perform tests and prepare test reports unless noted otherwise. The Contractor's Representative will perform visual inspection of all field welds in accordance with the requirements of Section 6 of AWS D1.1 as applicable.

The Contractor's Representative will verify that the structural steel is installed in accordance with the tolerances specified in the AISC Code of Standard Practice.

Contractor Inspection: Surveillance will be performed by the Contractor's Representative to verify compliance of the work to the drawing and specifications.

END OF SECTION 05100

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SECTION 05101--STAINLESS STRUCTURAL STEEL

PART 1--GENERAL

SUMMARY:

Section Includes, but is not limited to:

Installation of all stainless steel liner plate.

Related Sections: 05060 Structural Welding
05100 Structural Steel and Miscellaneous Metals

REFERENCES:

The following documents, including others referenced therein, form part of this Section to the extent designated herein.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 240	Standard Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels
ASTM A 276	Standard Specification for Stainless Steel Bars and Shapes

SUBMITTALS:

See Section 01300, Section 05060, Section 05100, and the Vendor Data Schedule for submittal requirements.

QUALITY CONTROL:

Regulatory Requirements (Codes and Standards): See Sections 05060 and 05100.

DELIVERY, STORAGE, AND HANDLING:

Store materials to permit easy access for inspection and identification. Protect members and materials from corrosion and carbon contamination.

Do not store or handle materials in a manner that might cause distortion or damage to members or supporting structures. Repair or replace damaged materials or structures that do not meet these specifications, as directed.

PART 2--PRODUCTS

MATERIALS:

All materials are GFE. The following material requirements are provided for information.

Plate: ASTM A 240, Type 304 or 304L.

Shapes: ASTM A 276, Type 304 or 304L.

FABRICATION:

Not applicable to this subcontract.

PART 3--EXECUTION

ERECTION:

Surveys: Check elevations and locations of steel surfaces, and locations of anchoring devices, before erection work proceeds, and report any discrepancies to the Contractor. Do not proceed with erection in areas of discrepancy until corrections have been made or until compensating adjustments have been agreed upon with the Contractor.

Field Assembly: Set steel accurately to lines and elevations indicated. Align and adjust various members before permanently fastening. Clean surfaces that will be in contact before assembly. Perform necessary adjustments to compensate for discrepancies in elevations and alignment. Level and plumb individual members of structure within tolerances as specified by AISC Specifications.

FIELD QUALITY CONTROL:

Contractor's Inspection: The Contractor's Representative will inspect welds and check tolerances for all fieldwork.

Surveillance will be performed by the Contractor's Representative to verify compliance of the work to the drawings and specifications.

END OF SECTION 05101

SECTION 13200--GFE BUILDING ERECTION

PART 1--GENERAL

SUMMARY:

The Subcontractor shall erect GFE building systems, complete, as shown on the subcontract drawings and as specified herein.

Section Includes, but is not limited to:

1. Erection of structural framing and installation of fabric cover for the Weather Enclosure Structure (WES) as shown on the drawings and per the building manufacturer's instructions and procedures.
2. Installation of all necessary trim, doors, door covers, accessories, and flashings at all penetrations to ensure weather tightness of the WES per the manufacturer's instructions and procedures.
3. Installation of louvers, vents and ventilators for the WES per the manufacturer's instructions and procedures.
4. Erection of a modular panel system enclosure for the Retrieval Confinement Structure per the suppliers instructions and procedures.
5. Installation of all anchors, doors, windows, gaskets, support brackets and accessories for the RCS.

Section Does Not Include:

1. Tape sealing and caulking of the RCS joints. Installation of panel base and window gaskets is an exception to this.
2. Penetrations for utilities and installation of interface fittings for the RCS.

Related Sections:

Section 05100 Structural Steel and Miscellaneous Metals
Section 05060 Structural Welding

REFERENCES:

See the references in the related sections.

SUBMITTALS:

No vendor data submittals required for this section.

QUALITY CONTROL:

Perform work in accordance with the codes and standards referenced in the related sections and the instructions and procedures supplied by the structure suppliers.

PART 2--PRODUCTS

MATERIALS:

Joint Sealant: Joint sealant shall be one-part elastomeric; polyurethane, polysulfide, or silicon rubber or as recommended by building manufacturer.

PIPE PENETRATIONS:

For pipe penetrations through the WES roof or walls use a pipe flashing unit as recommended by the building manufacturer.

PART 3--EXECUTION

ERECTION:

General: Design details, dimensions, and sizes are representative only. Subcontractor shall be responsible for all adjustments required to plans as a consequence of differing building or enclosure dimensions or details. Shop and erection drawings and procedures shall be provided by the GFE building and enclosure manufacturers and transmitted by the Contractor to the Subcontractor when they are available.

Framing: Erect structural framing true to line, level and plumb, rigid and secure. Level base plates to a true even plane with full bearing to supporting structures

Bracing: Install bracing as directed by the building or enclosure manufacturer.

SEALING:

Seal all joints, penetrations, or sleeves for the WES. Tape sealing and caulking of the RCS is not part of this Subcontract.

FIELD QUALITY CONTROL:

Contractor Supplied Testing: The Contractor's Representative will inspect high-strength bolted connections and perform tests, visual inspection and prepare test reports unless noted otherwise.

Surveillance will be performed by the Contractor's Representative to verify compliance of the work to the drawings and specifications.

END OF SECTION 13200

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08/01/2001
Rev. 03

Vendor Data Schedule

Project Title OU 7-10 Glovebox Excavator Method Project Facility Structures

Purchase Order/ Work Order/ Subcontract No.

System Engineer/ Project Manager JENSEN SCOTT A **Date:** 22-APR-02

Rev: 0

Vendor Data Coordinator Address POOLE M ANNETTE, TSB-1WI404, MS: 3915

Vendor Data Codes

A. As-Built Drawings B. Assembly Drawings C. Attendance Record D. Blasting Plan E. Catalog Data F. Chem & Physical Analysis G. Concrete Mix Design H. Control System Diagram I. Design Calculations J. Installation Instructions	K. Manufacturers Data Report L. O&M Manual M. Parts List N. Piping Drawing O. Procedure/Instructions P. Pump Head Curves Q. Personnel Qualifications R. Red_line Drawings S. RSMI & Maintenance Log T. Sample(Color, Texture, etc.)	U. Shop Drawings V. Survey Records W. Test Procedure X. Special Processes Y. Operational/CC Testing Z. Test Reports AA. UL/FM Listing AB. Warranty/Guarantee AC. Weld Records AD. Wiring Diagrams	AE. MSDS AF. Hardware Schedule AG. Specification AH. Manufacturing/Inspection/Test Plan AI. Test Certification AJ. Recommended Spares AK. Special Tools List AL. Certificate of Conformance AM. Certificate of Disposal or Destruction AN. Design Verification	AO. Design Qualification Testing AP. Traceability Procedure AQ. Cleaning Procedure AR. Weld Procedure Qualificaiton AS. Welder Performance Personnel Qualifications AT. Non-Destructive Examination Personnel Certifications AU. Inspector Certifications AV. Limited Shelf Life/Operational Data AW. Special Packaging, Shipping, and Rigging Procedure AX. Certificate of Materials to ASME Code AY. Chemical Inventory AZ. Other

When to Submit

AC - As Completed AT - After Test BC - Before Contract Awarded	BFA - Before Final Acceptance BFR - Before Fabrication Release ROS - Removed Off-Site PDS - Prior to Delivery on site	PTP - Prior to Purchase PS - Prior to Shipment PT - Prior to Test	PTC - Prior to Construction Start PTI - Prior to Installation PTW - Prior to Welding	TS - Time of Shipment WP - With Proposal

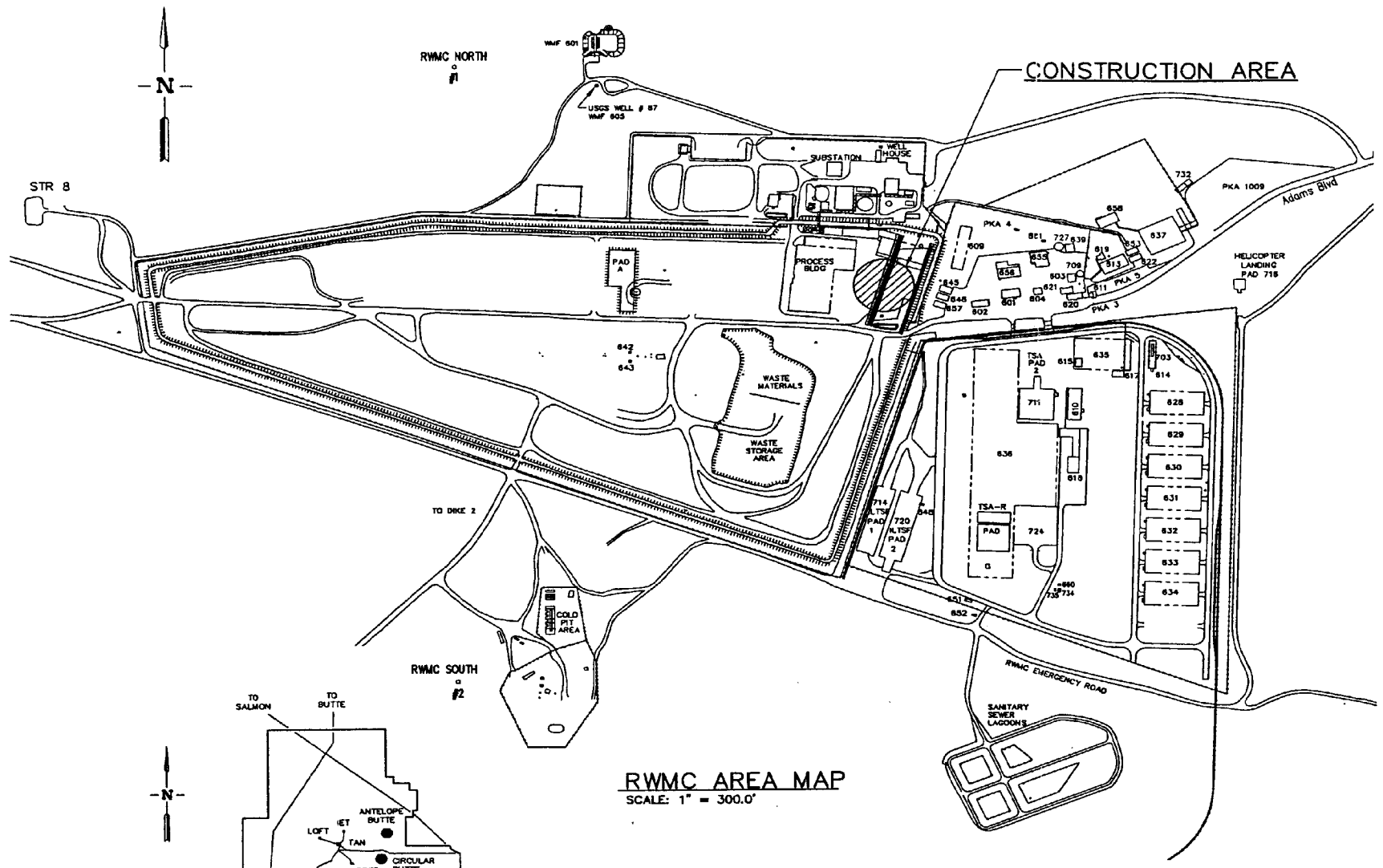
Item No.	Clause/Article or Drawing/Specification Reference	Description	Vendor Data Code	Extra Copies Required	When to Submit	Approval Code
1	02598	Certification	AL. Certificate of Conformance	0	PDS - Prior to Delivery on site	1. Approval Required
2	02598	Quality Control Plan	AZ. Other	0	BFR - Before Fabrication Release	1. Approval Required
3	02598	Test Reports	Z. Test Reports	0	PDS - Prior to Delivery on site	1. Approval Required
4	02598	Qualifications	Q. Personnel Qualifications	0	PTC - Prior to Construction Start	1. Approval Required
5	02598	Geomembrane shop drawings	U. Shop Drawings	0	BFR - Before Fabrication Release	1. Approval Required
6	02598	Geomembrance installations drawings	B. Assembly Drawings	0	BFR - Before Fabrication Release	1. Approval Required

7	05060	Welding Personnel Qualification Records for Carbon Steel	AS. Welder Performance Personnel Qualifications	0	PTW - Prior to Welding	Information Only
8	05060	Filler Material CMTR for Carbon Steel	F. Chem & Physical Analysis	0	PTI - Prior to Installation	Information Only
9	05060	Detailed Weld Repair Procedures for Carbon Steel	AR. Weld Procedure Qualificaiton	0	PTW - Prior to Welding	1. Approval Required
10	05060	Weld Repair Reports	AC. Weld Records	0	BFA - Before Final Acceptance	Information Only
11	05060	Weld Histories	AC. Weld Records	0	BFA - Before Final Acceptance	Information Only
12	05060	Procedures for the Handling, Storage, and Control of Filler and Backing Materials	AP. Traceability Procedure	0	PTW - Prior to Welding	1. Approval Required
13	05060	Nondestructive Examination Procedures for Carbon Steel	X. Special Processes	0	PTW - Prior to Welding	1. Approval Required
14	05060	Nondestructive Examination Personnel Qualification Records for Carbon Steel	AT. Non-Destructive Examination Personnel Certifications	0	PTW - Prior to Welding	Information Only
15	05060 & 05101	Cleaning Procedures for Stainless Steel	AQ. Cleaning Procedure	0	PTI - Prior to Installation	Information Only
16	05060 & 05101	Welding Personnel Qualification Records for Stainless Steel	AS. Welder Performance Personnel Qualifications	0	PTW - Prior to Welding	Information Only
17	05060 & 05101	Nondestructive Examination Personnel Qualification Records for Stainless Steel	AT. Non-Destructive Examination Personnel Certifications	0	PTW - Prior to Welding	Information Only
18	05060 & 05101	Filler Material CMTR for Stainless Steel	F. Chem & Physical Analysis	0	PTI - Prior to Installation	Information Only
19	05060 & 05101	Nondestructive Examination Procedures for Stainless Steel	X. Special Processes	0	PTW - Prior to Welding	1. Approval Required
20	05060 & 05101	Welding Procedure Specifications and Procedure Qualification Records for Stainless Steel	AR. Weld Procedure Qualificaiton	0	PTW - Prior to Welding	1. Approval Required
21	05060 & 05101	Procedures for Identification and Control of Tools and Equipment	O. Procedure/Instructions	0	PTI - Prior to Installation	Information Only
22	05060 & 05101	Welding Procedure Specifications and Procedure Qualification Records for Carbon Steel	AR. Weld Procedure Qualificaiton	0	PTW - Prior to Welding	1. Approval Required
23	05100	Erection Plan	B. Assembly Drawings	0	PTI - Prior to Installation	1. Approval Required
24	05100	Procedure for tightening of slip critical bolts	O. Procedure/Instructions	0	PTI - Prior to Installation	1. Approval Required
25	05100	Installation instructions for screws, rivets and other miscellaneous fasteners	J. Installation Instructions	0	PTI - Prior to Installation	1. Approval Required

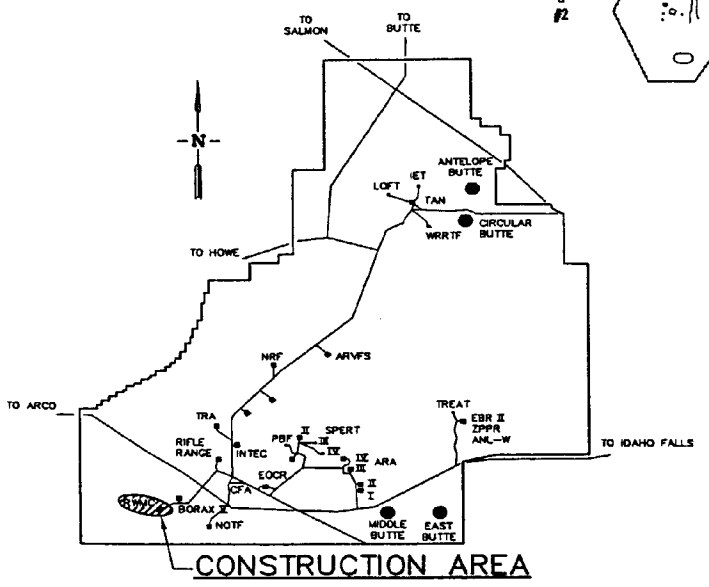
Instructions:

1. Refer to subcontract documents for instructions on submittals.
2. Electronic submittals in lieu of paper documents are acceptable and encouraged.
3. The normal number of copies required is ONE. If more are required, the number will be shown here.
4. THE INEEL WILL SCAN ALL SUBMITTED VENDOR DATA INTO A SYSTEM THAT IS ACCESSIBLE TO ALL INEEL EMPLOYEES UNLESS THE SUPPLIER/SUBCONTRACTOR IDENTIFIES SUBMITTED INFORMATION AS PROPRIETARY.

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE:



RWMC AREA MAP
SCALE: 1" = 300.0'



SITE MAP
SCALE: NONE

DRAWING INDEX

PAGE NO.	DWG NO.	A-E SH NO.	REV	DRAWING TITLE
TITLE SHEET				
1	519935	T-1		SITE MAP, AREA MAP AND DRAWING INDEX
CIVIL				
2	519936	C-1		PLOT PLAN AND EXISTING ELEVATIONS
3	519937	C-2		PLAN AND SECTIONS
ARCHITECTURAL				
4	519938	A-1		FLOOR PLAN

FACILITY FLOOR STRUCTURE, "FFS", DRAWINGS

519907 T-1 SITE MAP, AREA MAP AND DRAWING INDEX
ALL DRAWINGS LISTED ON THIS T-1 SHEET ARE APPLICABLE

INFORMATION ONLY DRAWINGS

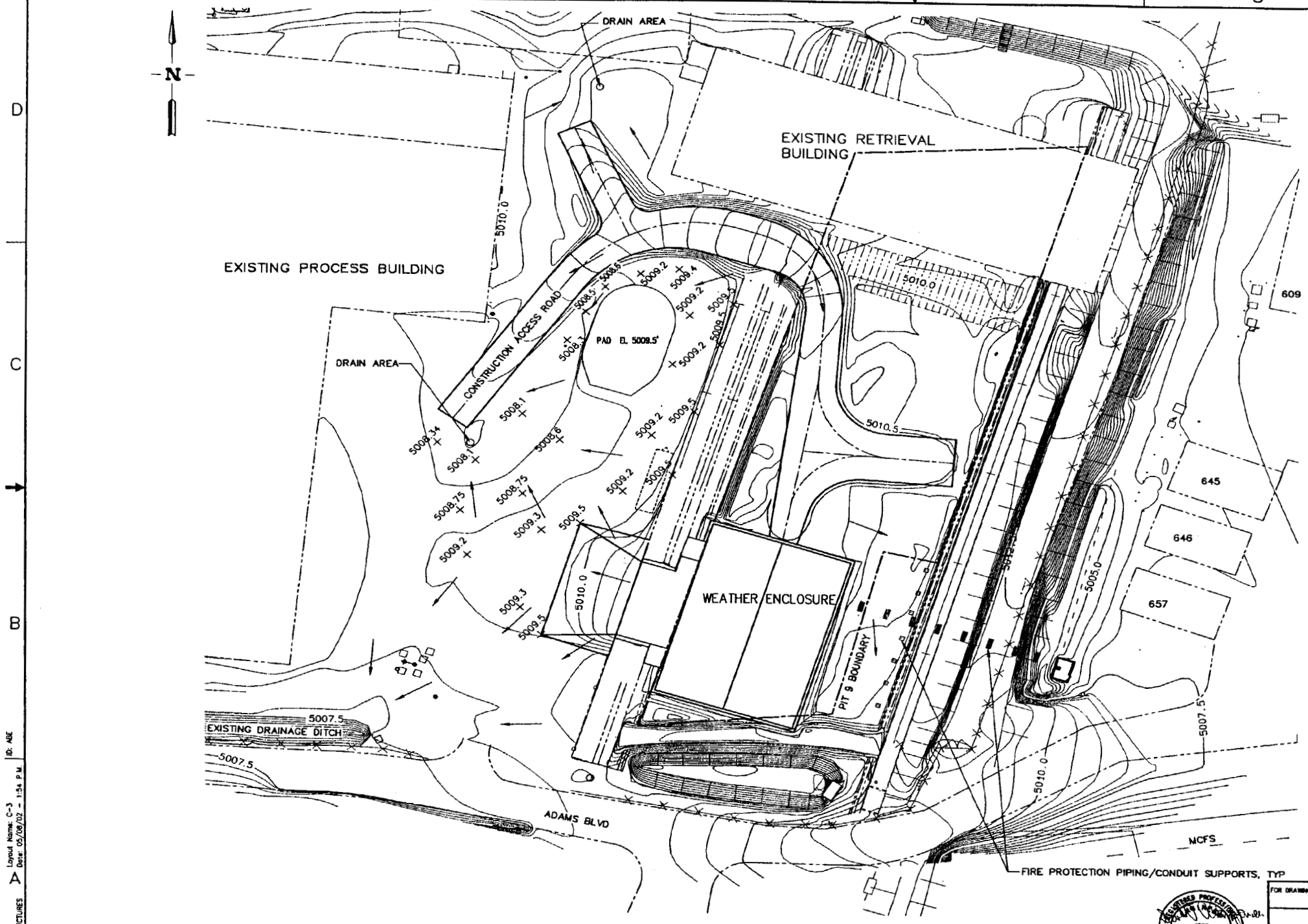
519888 T-1 RETRIEVAL CONFINEMENT STRUCTURE, "RCS"
SITE MAP, AREA MAP AND DRAWING INDEX
ALL DRAWINGS LISTED ON THIS T-1 SHEET ARE APPLICABLE

519896 T-1 WEATHER ENCLOSURE STRUCTURE, "WES"
SITE MAP, AREA MAP AND DRAWING INDEX
ALL DRAWINGS LISTED ON THIS T-1 SHEET ARE APPLICABLE

X-REFERENCE DRAWINGS

519670	FACILITY FLOOR STRUCTURE "FFS"
519671	RETRIEVAL CONFINEMENT STRUCTURE "RCS"
519678	SITE LAYOUT

FOR DRAWING INDEX SEE DRAWING NO. 519935	SUBCONTRACT NO. N/A	INEEL
SCALE: 1" = 300.0'	REQUESTER: SA DAVIES	OU 7-10 GLOVEBOX EXCAVATOR METHOD PROJECT FACILITY STRUCTURE
DESIGN PHASE: AFC	DESIGN: SA JENSEN	SITE MAP, AREA MAP AND DRAWING INDEX
SAFETY CATEGORY: SS	DRAWN: CA BEHM	SIZE D; CAGE CODE 1MF3; DWG-519935; REV
	PROJECT NO. 021052	SCALE: NOTED; SHEET T-1
	SPEC CODE	
	FOR REVIEW/APPROVAL SIGNATURES SEE BAR NO. 91780	
	EFFECTIVE DATE:	



PLOT PLAN AND EXISTING ELEVATIONS
SCALE: 1" = 30.0' CONTOUR INTERVAL: 0.5'

REVISIONS

REV	DESCRIPTION	EFFECTIVE DATE

LEGEND

- X 5000.XX — INDICATES SPOT GRADE ELEVATION
- INDICATES DIRECTION OF DRAINAGE FLOW
- MCFS — MAIN CHANNEL FLOW SYSTEM

X-REF DRAWINGS
519678-1

DATUM
-RWMC SITE SPECIFIC COORDINATES
-NGVD 1929, VERTICAL

FOR DRAWING INDEX SEE DRAWING NO.	519935
SUBCONTRACT NO.	N/A
REQUESTER: SA DAMES	
DESIGN: SA JENSEN	
DRAWN: CA BEHM	
PROJECT NO.	021052
SPEC CODE	
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 91760	
EFFECTIVE DATE: 5/16/02	
DESIGN PHASE:	AFC
SAFETY CATEGORY:	CG

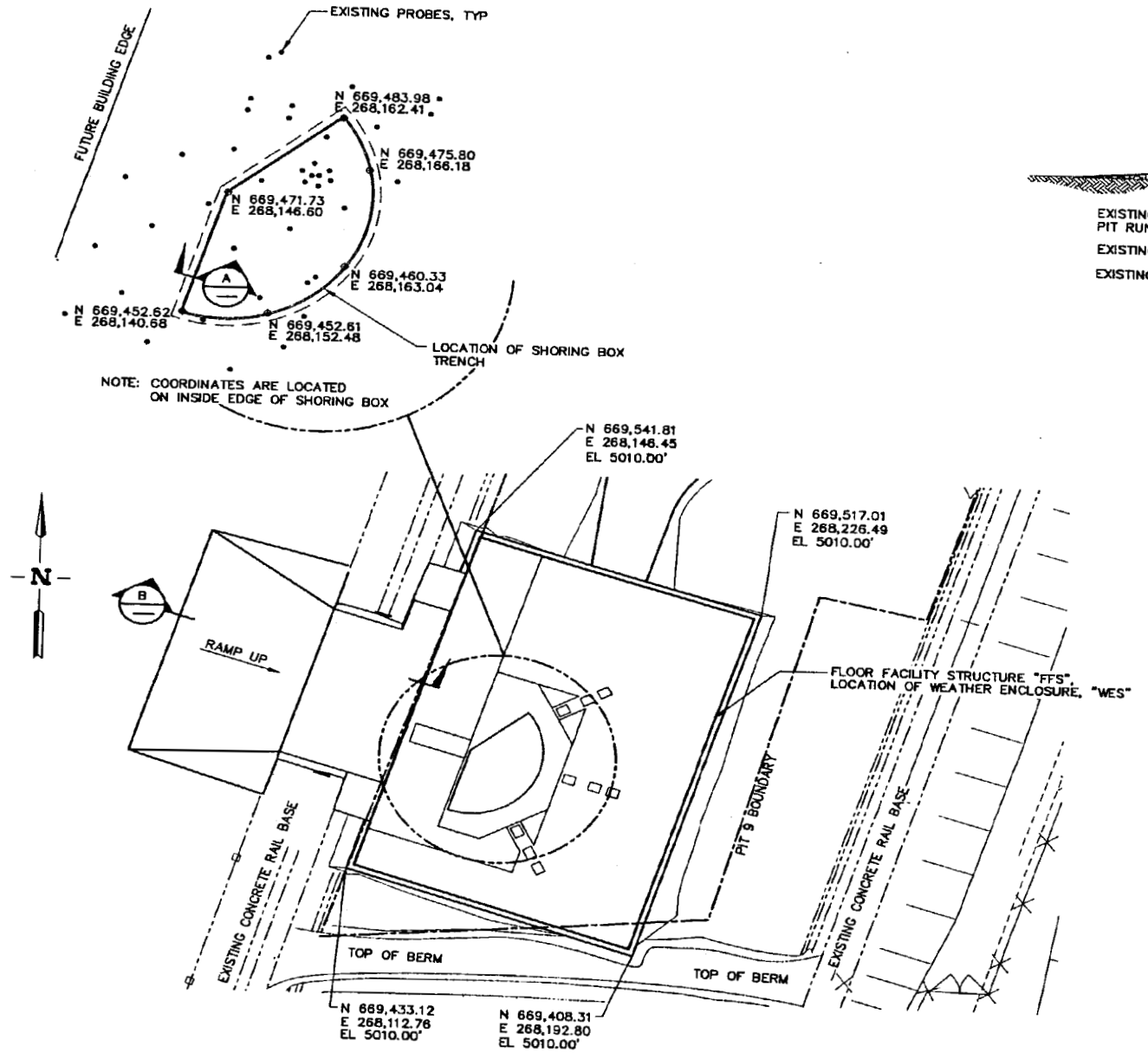
SCALE: 1" = 30.0'

INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY STRUCTURE
PLOT PLAN AND EXISTING ELEVATIONS

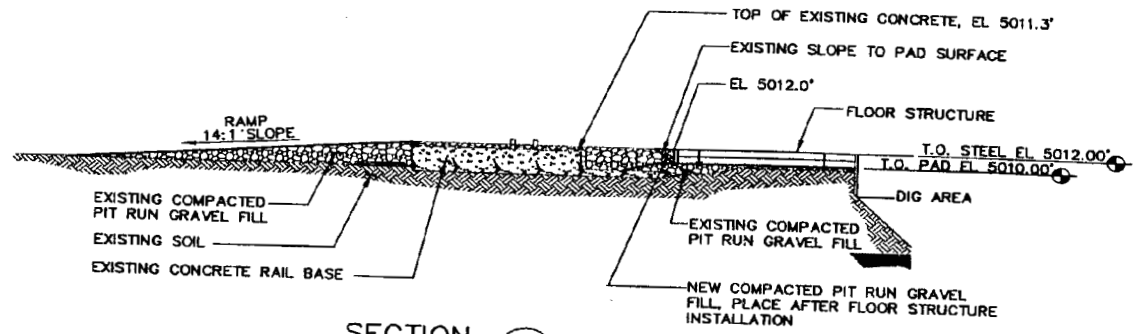
SIZE	CAGE CODE	INDEX CODE NUMBER	DWG-	REV
D	01MF3	AREA TYPE Q SEQ 098 0100 02 090	519936	

SCALE: NOTED SHEET C-1

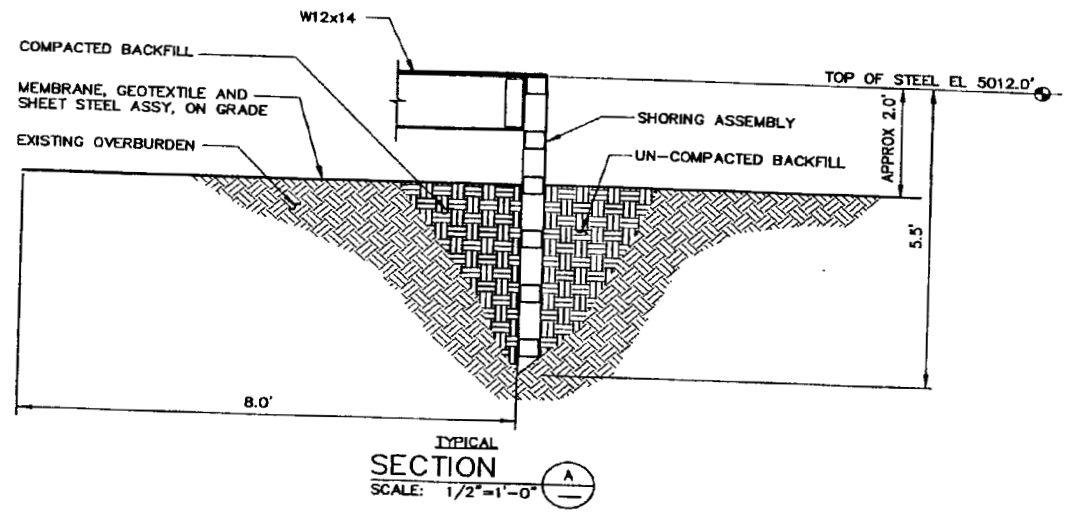
File: 519936.dwg
Path: y:\FACILITY_STRUCTURES
Layout Name: C-3
Date: 05/08/02 - 1:54 P.M.
ID: ABE



ENLARGED PLAN
SCALE: 1" = 20.0'



SECTION (B)
SCALE: 1" = 10.0'



TYPICAL
SECTION (A)
SCALE: 1/2"=1'-0"

NOTE

1. SEE SHT C-1 FOR ADDITIONAL EXISTING GRADE INFORMATION.

X-REF DRAWINGS

519678-1

DATUM

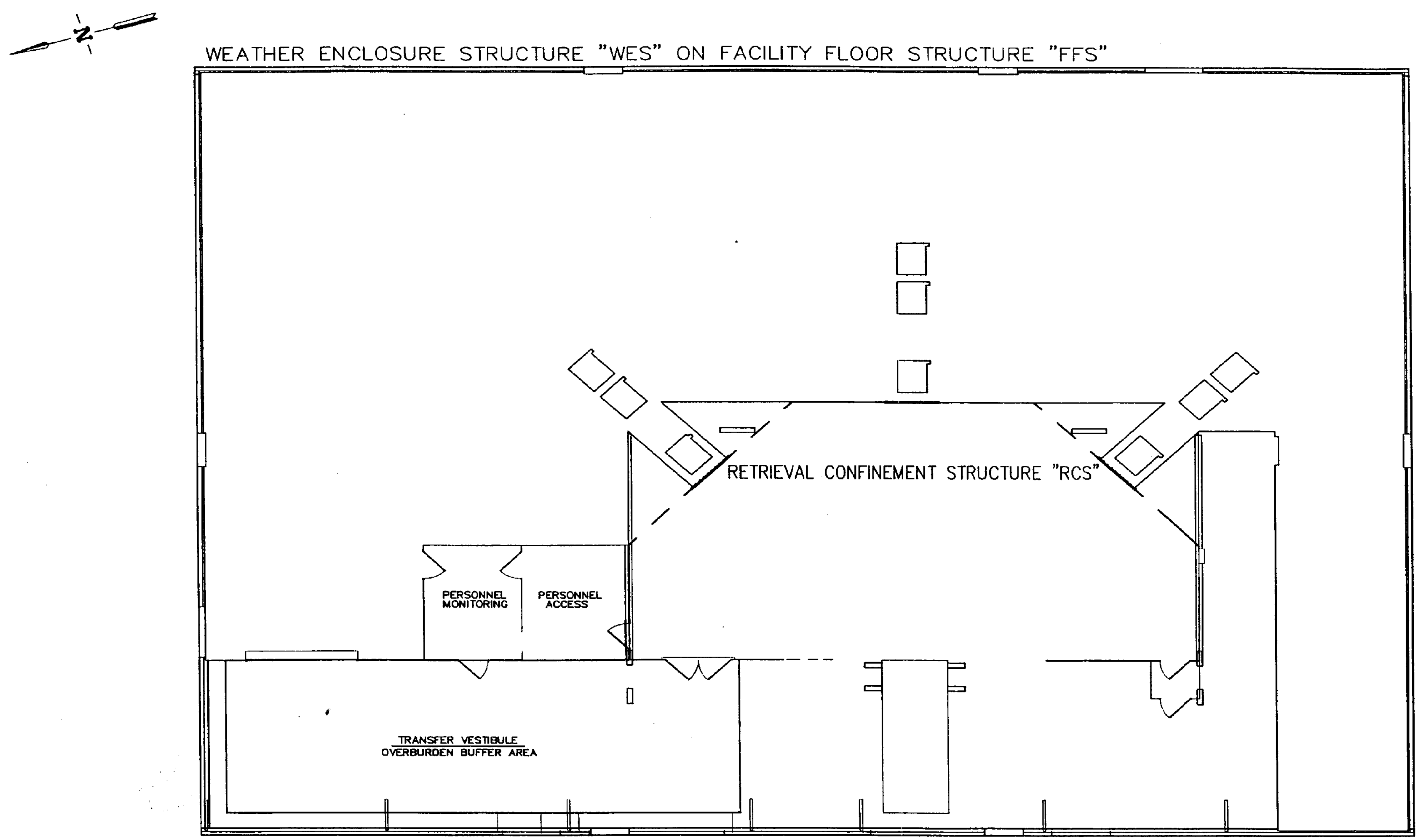
-RWMC SITE SPECIFIC COORDINATES
-NGVD 1929, VERTICAL

FOR DRAWING INDEX SEE DRAWING NO. 519935	SUBCONTRACT NO. N/A	INEEL
SCALE: 1" = 20.0' / SCALE: 1/2" = 1'-0"	REQUESTER: SA DAVIES	OU 7-10 GLOVEBOX EXCAVATOR METHOD PROJECT FACILITY STRUCTURE
DESIGN PHASE: AFC	DESIGN: SA JENSEN	PLAN AND SECTIONS
SAFETY CATEGORY: SS	DRAWN: CA BEHM	SIZE: D, CAGE CODE: 01MF3, DWG: 519937, REV
	PROJECT NO. 021052	SCALE: NOTED, SHEET C-2
	SPEC CODE	
	FOR REVIEW/APPROVAL SIGNATURES SEE DWR NO. 91760	
	EFFECTIVE DATE: 5/10/02	

PROFESSIONAL ENGINEER — STATE OF IDAHO — SCOTT ALAN JENSEN — 5/10/02

REV	DESCRIPTION	EFFECTIVE DATE
	REVISIONS	

Layout Name: C-1 | ID: ABE
Date: 05/08/02 - 3:46 P.M.
File: 519937.dwg
Path: X:\FACILITY_STRUCTURES



PLAN
SCALE: 3/16" = 1'-0"

X-REF DRAWINGS
519670
519671-1

REVISIONS

REV	DESCRIPTION	EFFECTIVE DATE:

FOR DRAWING INDEX SEE DRAWING NO. 519935
SCALE: 3/16" = 1'-0"
DESIGN PHASE: AFC
SAFETY CATEGORY: CG

SUBCONTRACT NO. N/A
REQUESTER: SA DAVIES
DESIGN: SA JENSEN
DRAWN: CA BEHM
PROJECT NO. 021052
SPEC CODE
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 91760
EFFECTIVE DATE: 5/1/02

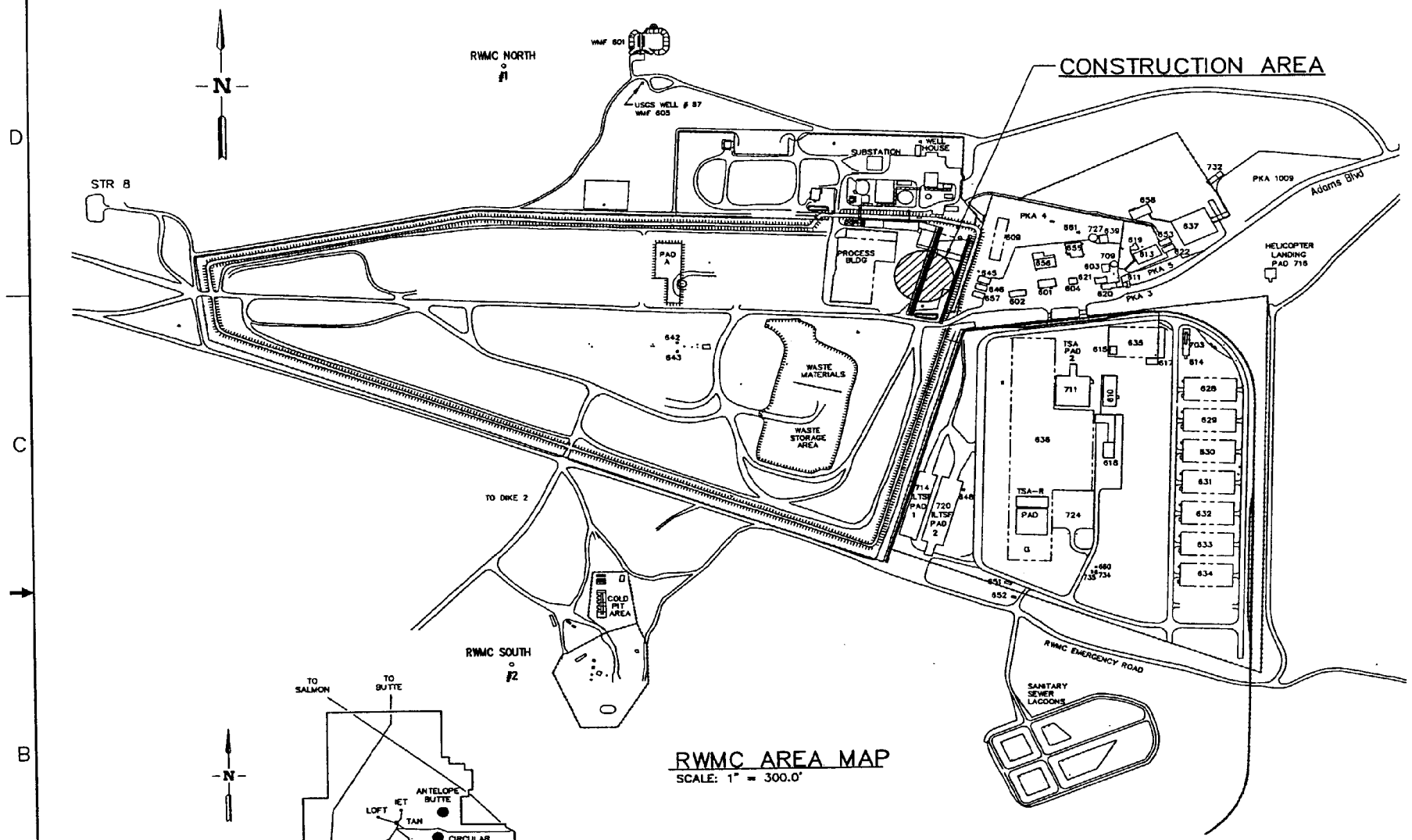
INEEL BECHTEL BWXT IDAHO, LLC
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY STRUCTURE
FLOOR PLAN

SIZE	CAGE CODE	AREA	TYPE	DL	DISC	DWG-	REV
D	01MF3	098	0671	00	090	519938	

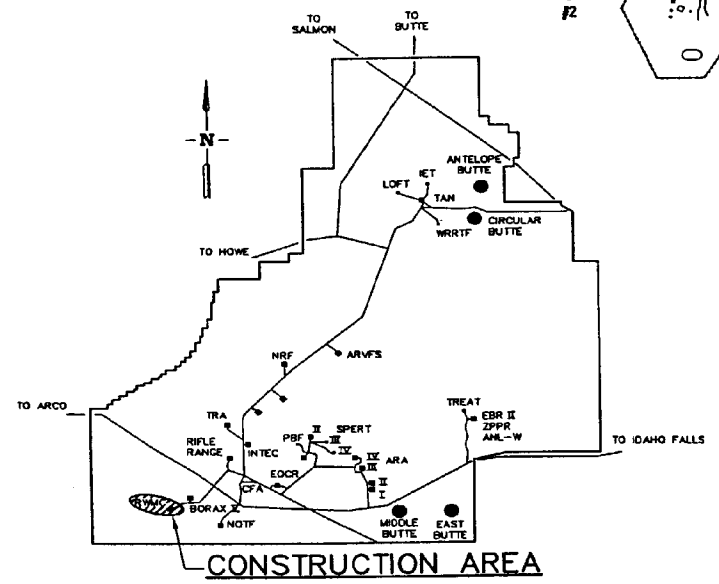
SCALE: NOTED
SHEET A-1

File: 519938.dwg
Path: V:\FACILITY_STRUCTURES
Layout Name: EQUIPMENT PLAN ID: ABE
Date: 05/08/02 - 3:47 P.M.

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE:



RWMC AREA MAP
SCALE: 1" = 300.0'



SITE MAP
SCALE: NONE

DRAWING INDEX

PAGE NO.	DWG NO.	A-E SH NO.	REV	DRAWING TITLE
TITLE SHEET				
1	519907	T-1		SITE MAP, AREA MAP AND DRAWING INDEX
STRUCTURAL				
2	519908	S-1		FLOOR DESIGN LOADING PLAN
3	519909	S-2		FLOOR FRAMING PLAN
4	519910	S-3		LOWER FRAMING PLAN
5	519911	S-4		UPPER FRAMING PLAN
6	519912	S-5		LARGE SCALE LOWER FRAMING PLAN
7	519913	S-6		LARGE SCALE UPPER FRAMING PLAN
8	519914	S-7		WELDED STEEL MEMBER ASSEMBLIES
9	519915	S-8		LARGE SCALE PLANS – GLOVEBOX 1 & 2
10	519916	S-9		LARGE SCALE PLAN – GLOVEBOX 3
11	519917	S-10		FLOOR PLATE PLAN
12	519918	S-11		PLATE AREA WITHOUT DECKING UNDERNEATH
13	519919	S-12		PLATE AREA WITH DECKING UNDERNEATH
14	519920	S-13		FLOOR DECKING PLAN
15	519921	S-14		SECTIONS, DETAILS AND SCHEDULE
16	519922	S-15		SECTIONS
17	519923	S-16		SECTIONS
18	519924	S-17		CONNECTION DETAILS AND SECTIONS
19	519925	S-18		SHORING PLAN, DETAILS AND VIEWS
20	519926	S-19		SORING SECTION, DETAILS AND VIEW
21	519927	S-20		LIFTING LUG PLAN AND DETAILS
ELECTRICAL				
22	519930	E-1		ELECTRICAL CONDUIT INSTALLATION PLAN

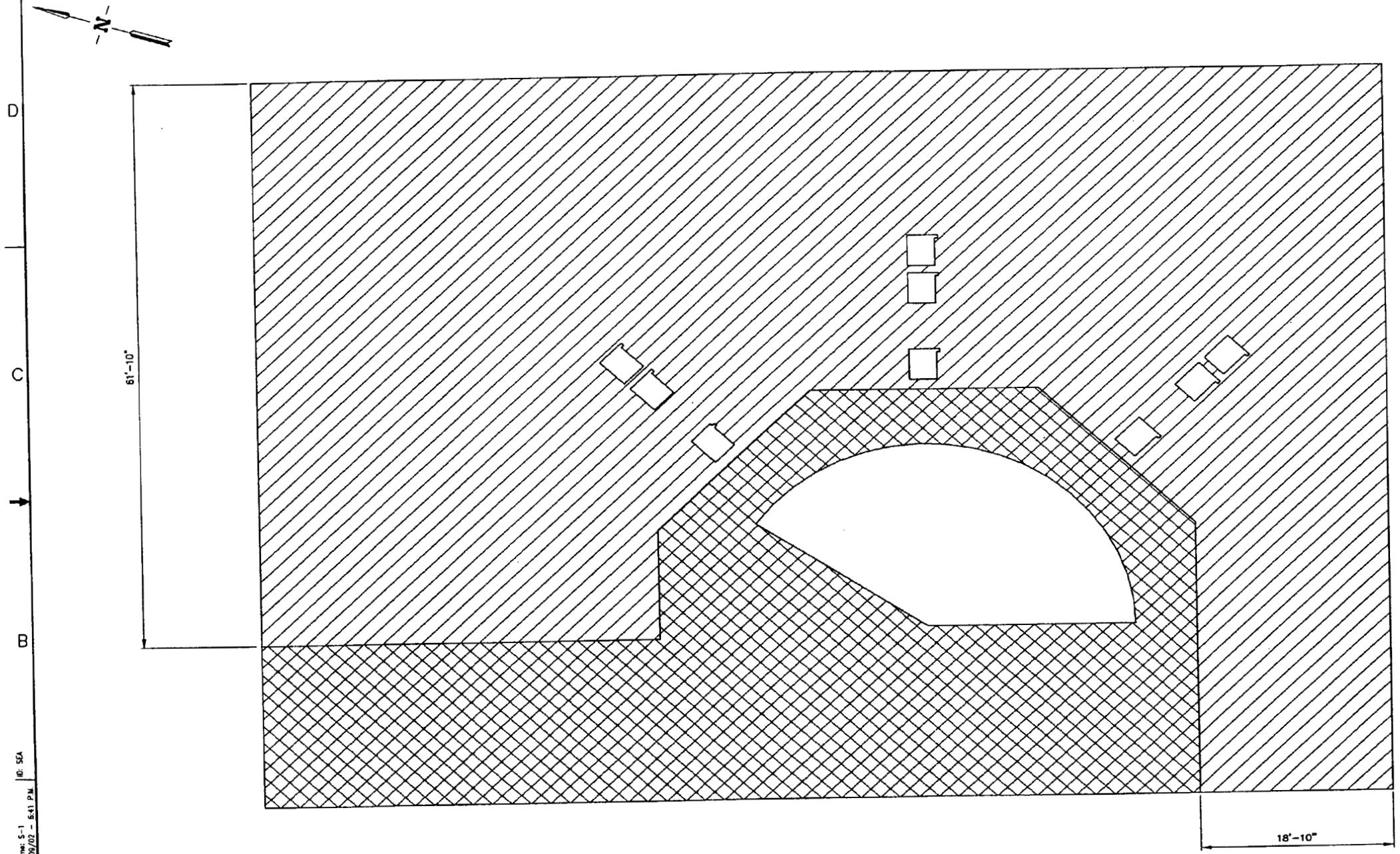
X-REFERENCE DRAWINGS

519070	FACILITY FLOOR
519861	SHORING BOX

FOR DRAWING INDEX SEE DRAWING NO. 519907	SUBCONTRACT NO. N/A	INEEL
SCALE: 1" = 300.0'	REQUESTER: SA DAVIES	OU 7-10 GLOVEBOX EXCAVATOR METHOD PROJECT FACILITY FLOOR STRUCTURE (FFS)
	DESIGN: S. JENSEN	
	DRAWN: B.SEARLE	
	PROJECT NO. 021052	SITE MAP, AREA MAP AND DRAWING INDEX
	SPEC CODE	
DESIGN PHASE: AFC	FOR REVIEW/APPROVAL SIGNATURES SEE BAR NO. 90845	SIZE D; CADE CODE 1MF3; INDEX CODE NUMBER AREA 098, TYPE 0100, SQ 01, ORIG 090; DWG- 519907; REV
SAFETY CATEGORY: SS	EFFECTIVE DATE:	SCALE: NOTED; SHEET T-1

File: 519907_Info.dwg ID: ABE Layout Name: Layout1
Path: V:\FACILITY_STRUCTURES Date: 05/09/02 – 8:12 P.M.

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE:



LEGEND

— TWO 3200 LBS. WHEEL LOAD SPACED APPROX. 3'-0" APART

— 7200 LBS. WHEEL LOAD SPACED APPROX. 3'-0" APART

GENERAL NOTES:

1. GENERAL FLOOR UNIFORM LIVE LOAD 100 PSF.
2. INDIVIDUAL FLOOR BEAMS IN THE 3200 LB. WHEEL LOAD AREA MAY HAVE UNIFORM LIVE LOADS UP TO 200 PSF.
3. INDIVIDUAL FLOOR BEAMS IN THE 7200 LB. WHEEL LOAD AREA MAY HAVE UNIFORM LIVE LOADS UP TO 400 PSF.
4. AXLE SPACING FOR WHEEL LOADS ASSUMED TO BE AT least 4'-0" APART.

X-REF DRAWINGS

519870.dwg
519861.dwg

FLOOR DESIGN LOADING PLAN

SCALE: 3/16"=1'-0"

REGISTERED PROFESSIONAL ENGINEER — 3/12/2002 — STATE OF IDAHO — SCOTT ALAN JENSEN

FOR DRAWING INDEX SEE DRAWING NO. 519907	SUBCONTRACT NO. N/A
SCALE: 3/16" = 1'-0"	REQUESTER: S.A. DAVIES
	DESIGN: S. JENSEN
	DRAWN: B.SEARLE
	PROJECT NO. 021052
	SPEC CODE
DESIGN PHASE: AFC	FOR REVIEW/APPROVAL SIGNATURES
SAFETY CATEGORY: SS	SEE DAR NO. 90645
	EFFECTIVE DATE: 5/10/02

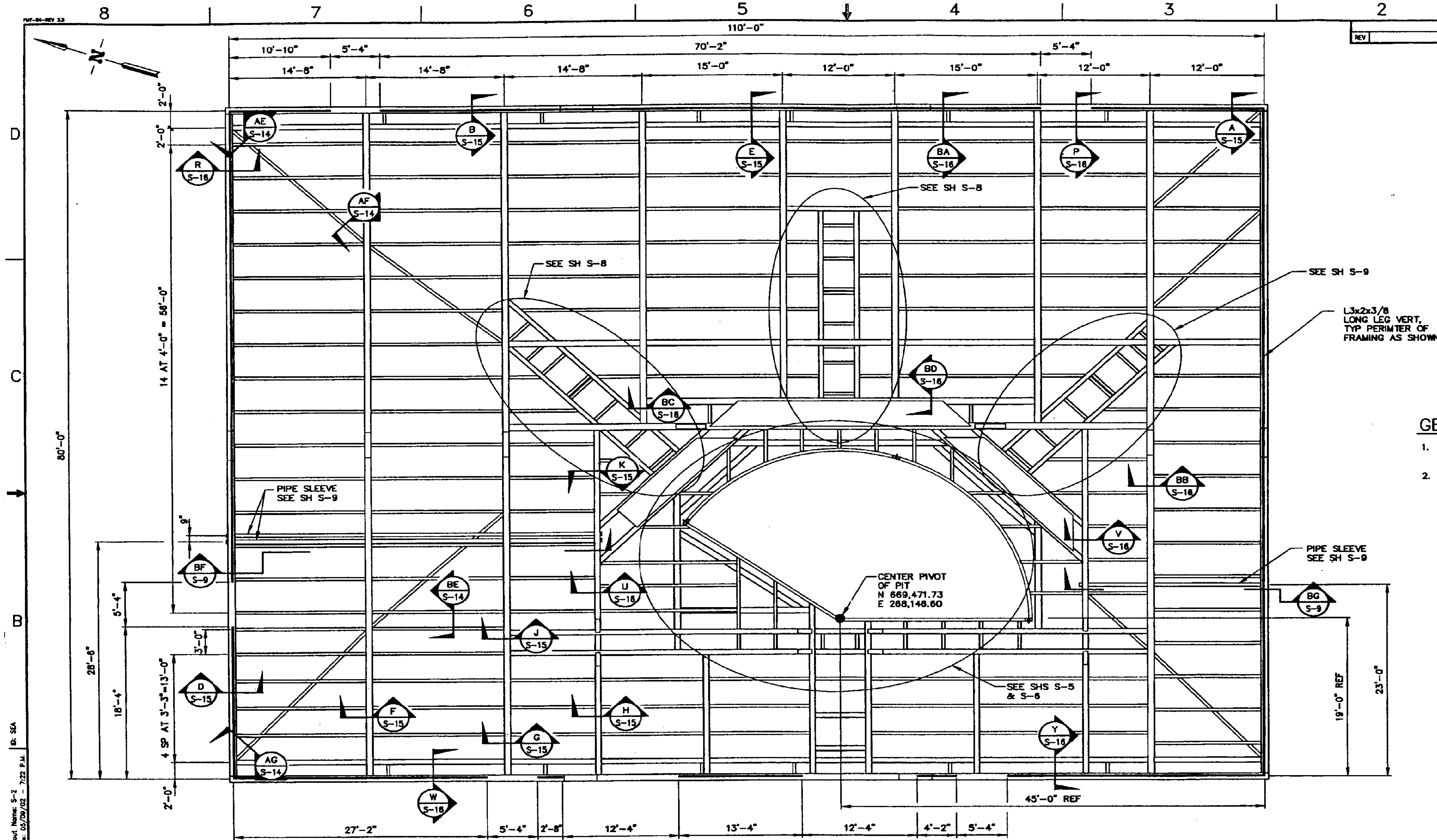
INEEL — Lockheed Martin Idaho Technologies Company / Bechtel BWXT Idaho, LLC

OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)

FLOOR DESIGN LOADING PLAN

SIZE	CAGE CODE	WORK ORDER NUMBER				DWG- 519908	REV
		AREA	TYPE	Q	ORG		
D	01MF3	098	0671	61	090		
SCALE: NOTED						SHEET S-1	

Layout Name: S-1 | ID: SEA
Date: 05/09/02 - 5:41 PM
File: 519908.dwg
Path: I:\VFC_FFS



FLOOR FRAMING PLAN

SCALE: 3/16"=1'-0"

GENERAL NOTES

1. EL 100'-0" (TOS) = 5012.0' ABOVE SEA LEVEL
2. PROVIDE 1'-0" SQUARE SHIP PLATES EVERY 10'-0" ALONG LENGTH OF INTERIOR W24'S AND W21'S.

X-REF DRAWINGS

519670.dwg
519861.dwg

FOR DRAWING INDEX SEE DRAWING NO.	519907
SUBCONTRACT NO.	N/A
REQUESTOR	S.A. DAVIES
DESIGN	S. JENSEN
DRAWN	B.SEARLE
PROJECT NO.	021052
SPEC CODE	
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO.	90845
EFFECTIVE DATE	3-10-02
DESIGN PHASE	AFC
SAFETY CATEGORY	SS
SCALE	NOTED
SIZE	D
CAGE CODE	01MF3
INDEX CODE NUMBER (AREA / TYPE / DL / DISC)	098 / 0671 / 61 / 090
DWG	519909
SHEET	S-2
REV	3

INEEL

OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)

FLOOR FRAMING PLAN

REVISIONS

REV	DESCRIPTION	EFFECTIVE DATE

SCOTT ALAN JENSEN — REGISTERED PROFESSIONAL ENGINEER — STATE OF IDAHO

File: 519909.dwg Path: Y:\AFC_FFS Layout Name: S-2 Date: 03/08/02 - 7:22 P.M. ID: SEA

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE:

110'-0" SEE SH S-4

14'-8" | 14'-8" | 14'-8" | 15'-0" | 12'-0" | 15'-0" | 12'-0" | 12'-0"

2'-0" | 2'-0" | 14 SPACES AT 4'-0" = 56'-0" | 80'-0" SEE SH S-4

W12x14 | W21x62 | W18x35 | W6x9 | W6x13 | W8x21

SEE NOTE 2

SEE NOTE 3 SEE SH S-8

SEE NOTE 3 SEE SH S-9

MOMENT CONNECTION TYP 3 PLACES SEE DETAIL 27 S-17

PIPE SLEEVE SEE SH S-9

SEE LARGE SCALE PLAN FOR THIS AREA ON SH S-5

CENTER PIVOT OF PIT N 569,471.73 E 268,146.60

18'-0"

4'-0"

33'-0"

14'-8" | 68'-8"

FLOOR FRAMING MEMBERS BELOW DECKING & 3/16" PLATE

LOWER FRAMING PLAN

SCALE: 3/16"=1'-0"

NOTES

1. ALL STEEL MEMBERS SHOWN ON PLAN ARE TOS EL. 99'-8 7/16" UNLESS NOTED OTHERWISE.
2. MEMBERS INDICATED (W8x13) TOS EL. 98'-9 9/16".
3. MEMBERS INDICATED (W6x9) TOS EL. 98'-8 11/16".

X-REF DRAWINGS

519670.dwg
519861.dwg

FOR DRAWING INDEX SEE DRAWING NO.	519907
SCALE: 3/16" = 1'-0"	
DESIGN PHASE:	AFC
SAFETY CATEGORY:	SS
SUBCONTRACT NO.	N/A
REQUESTER: S.A. DAMES	
DESIGN: S. JENSEN	
DRAWN: B.SEARLE	
PROJECT NO.	021052
SPEC CODE	
FOR REVIEW/APPROVAL SIGNATURES SEE DWG NO. 90845	
EFFECTIVE DATE:	5/10/02

INEEL

OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)
LOWER FRAMING PLAN

SIZE	CAGE CODE	DRAWING NUMBER	REV
D	01MF3	DWG-519910	

SCALE: NOTED | SHEET S-3

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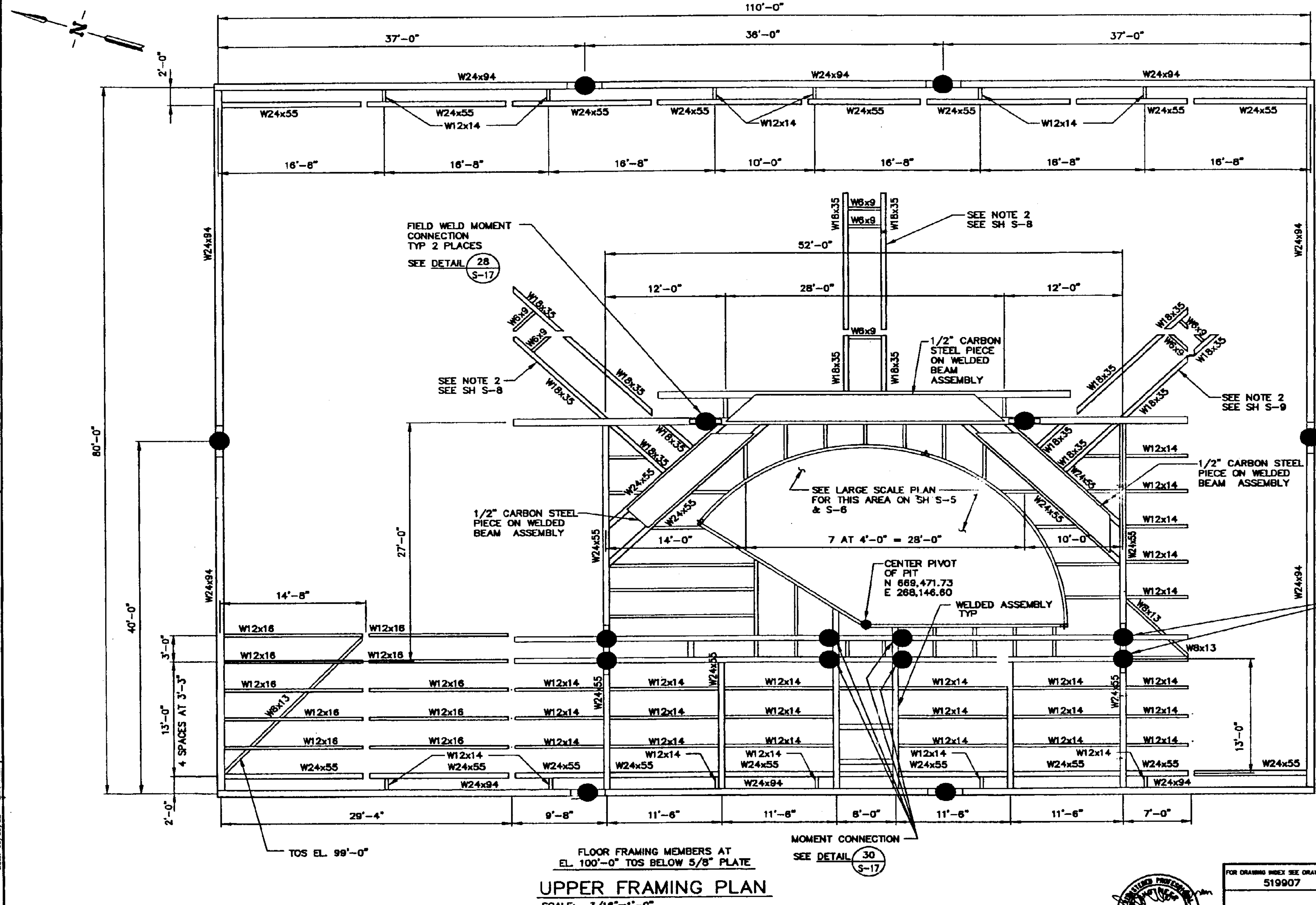
Path: I:\AFC_FFS
Layout Name: S-3
Date: 05/09/02 - 1:50 P.M.
Init: SEA



FLOOR FRAMING MEMBERS AT EL 100'-0" TOS BELOW 5/8" PLATE

UPPER FRAMING PLAN

SCALE: 3/16"=1'-0"

NOTES

1. ALL STEEL MEMBERS SHOWN ON PLAN ARE TOS EL 100'-0" UNLESS NOTED OTHERWISE.
2. MEMBERS INDICATED (W18x35 AND W6x9) TOS EL 100'-0 7/16".

X-REF DRAWINGS

519670.dwg
519861.dwg

REV	DESCRIPTION	EFFECTIVE DATE

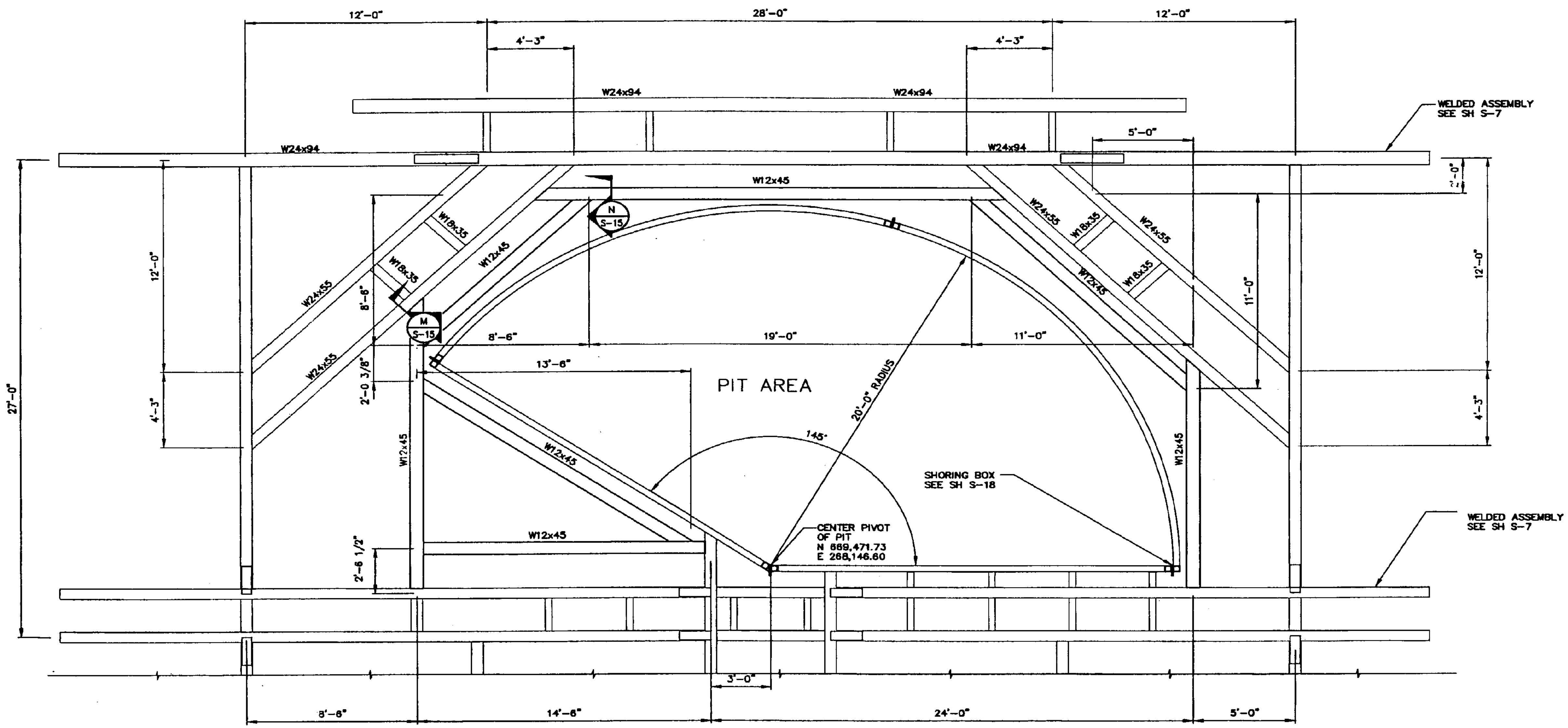
FOR DRAWING INDEX SEE DRAWING NO. 519907
SUBCONTRACT NO. N/A
REQUESTER: S.A. DAVIES
DESIGN: S. JENSEN
DRAWN: B.SEARLE
PROJECT NO. 021052
SPEC CODE
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90845
EFFECTIVE DATE: 5/10/02
SCALE: 3/16" = 1'-0"
DESIGN PHASE: AFC
SAFETY CATEGORY: SS

INEEL

OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)
UPPER FRAMING PLAN

SIZE: D | CAGE CODE: 01MF3 | INDEX CODE NUMBER: 098 0671 61 090 | DWG-519911 | REV
SCALE: NOTED | SHEET S-4

Layout Name: S-4 Date: 05/09/02 - 2:00 P.M. ID: SEA
File: 519911.dwg Path: Y:\AFC_FFS



LOWER FLOOR PIT PERIMETER FRAMING

LARGE SCALE LOWER FRAMING PLAN

SCALE: 3/8"=1'-0"

NOTES

W12x45 MEMBERS TOS EL. 99'-0 1/16". ALL OTHER MEMBERS SHOWN TOS EL. 100'-0".

X-REF DRAWINGS

519670.dwg
519861.dwg

REV	DESCRIPTION	EFFECTIVE DATE:

REVISIONS

FOR DRAWING INDEX SEE DRAWING NO. 519907	SUBCONTRACT NO. N/A
SCALE: 3/8" = 1'-0"	REQUESTER: S.A. DAVIES
	DESIGN: S. JENSEN
	DRAWN: B.SEARLE
	PROJECT NO. 021052
	SPEC CODE
DESIGN PHASE: AFC	FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90845
SAFETY CATEGORY: SS	EFFECTIVE DATE: 5/10/02

INEEL

OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)

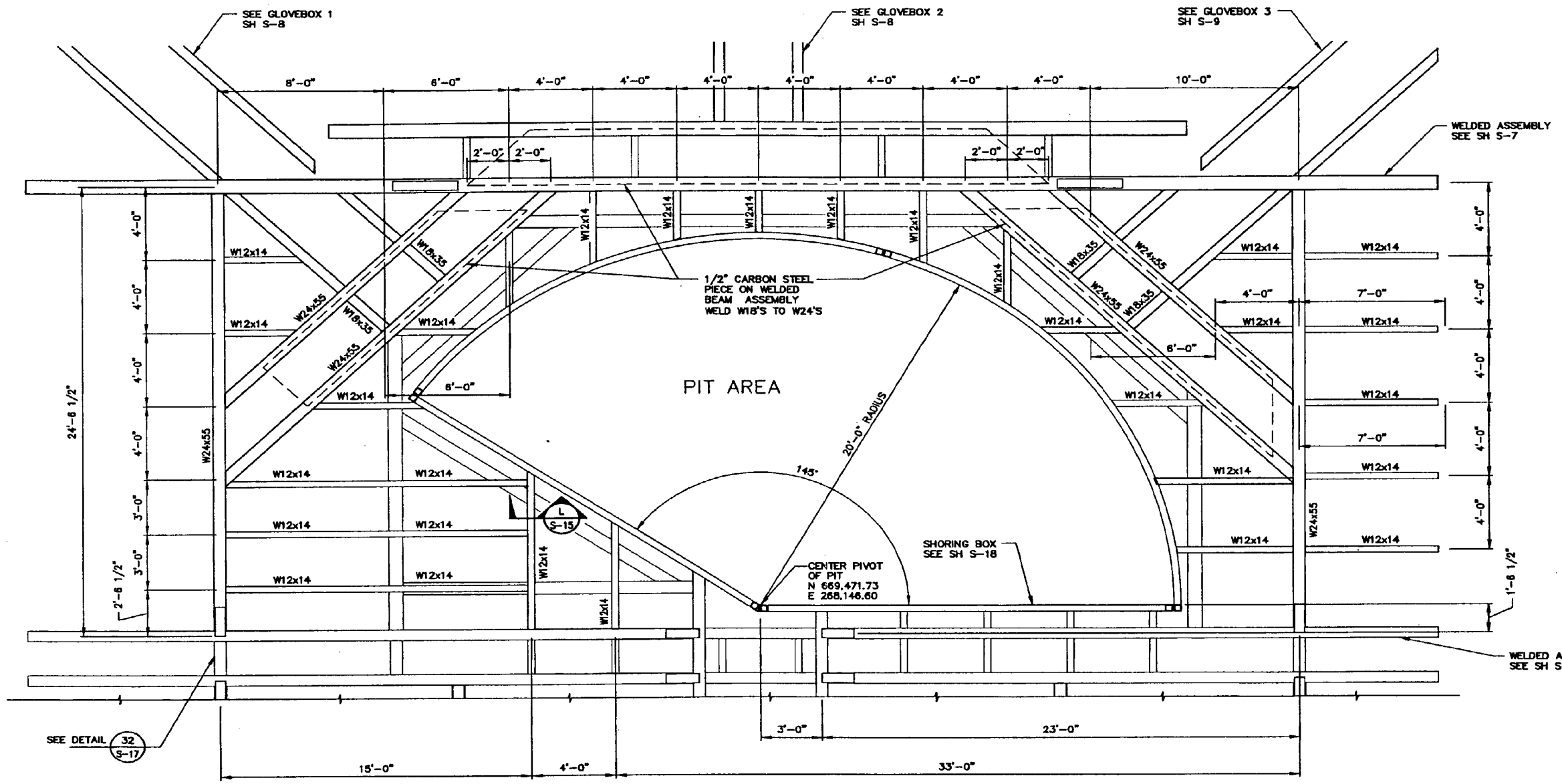
LARGE SCALE LOWER FRAMING PLAN

SIZE	CAGE CODE	AREA	TYPE	Q	ORG	DWG	REV
D	01MF3	098	0671	61	090	519912	6

SCALE: NOTED — SHEET S-5

File: 519912.dwg Path: Y:\AFC_FFS Layout Name: S-5 Date: 05/09/02 - 2:03 P.M. ID: SEA

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE:



UPPER FLOOR PIT PERIMETER FRAMING

LARGE SCALE UPPER FRAMING PLAN

SCALE: 3/8"=1'-0"

NOTES

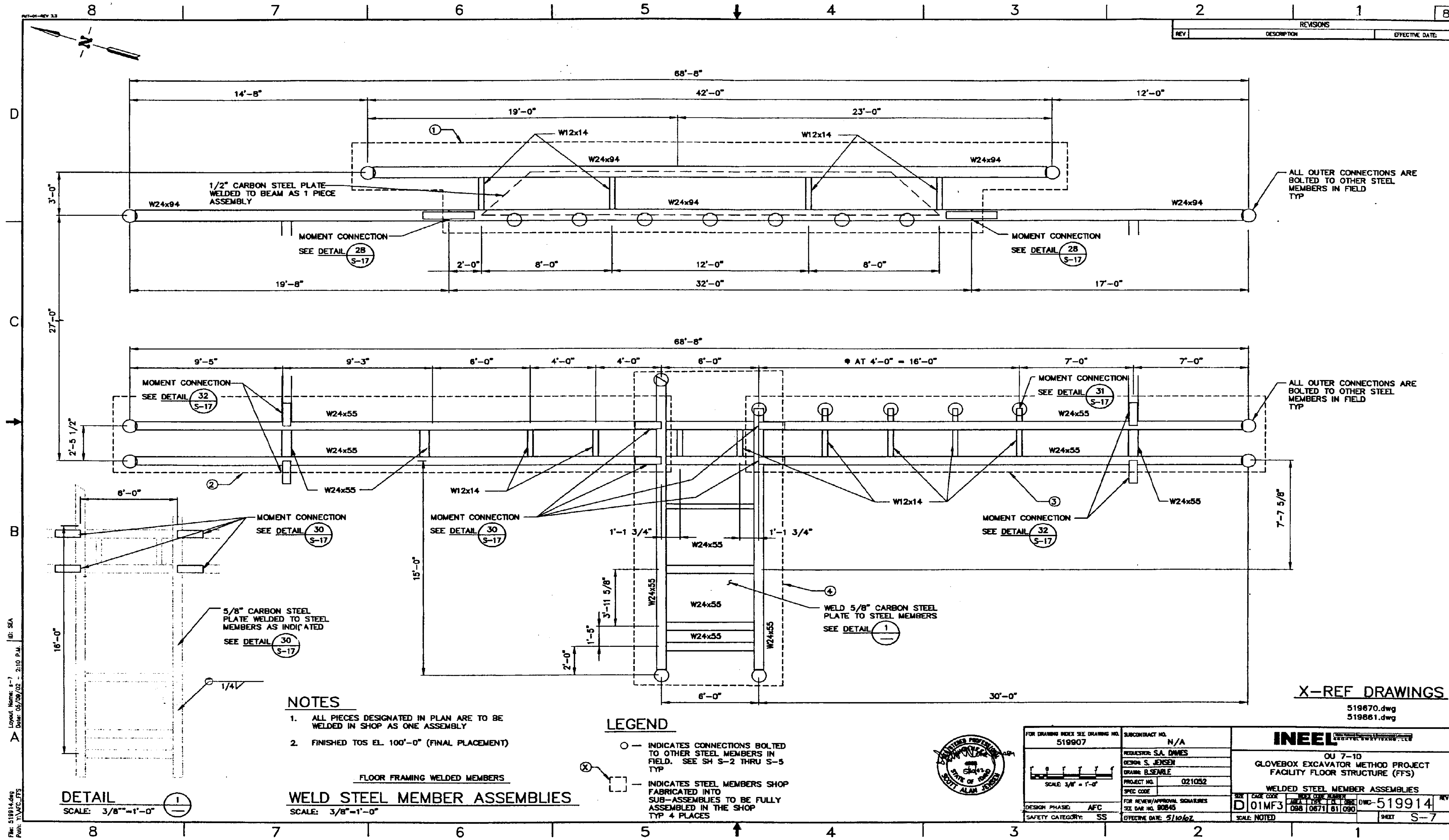
1. TOS EL. MEMBERS CALLED OUT ON THIS SH, 100'-0".

X-REF DRAWINGS

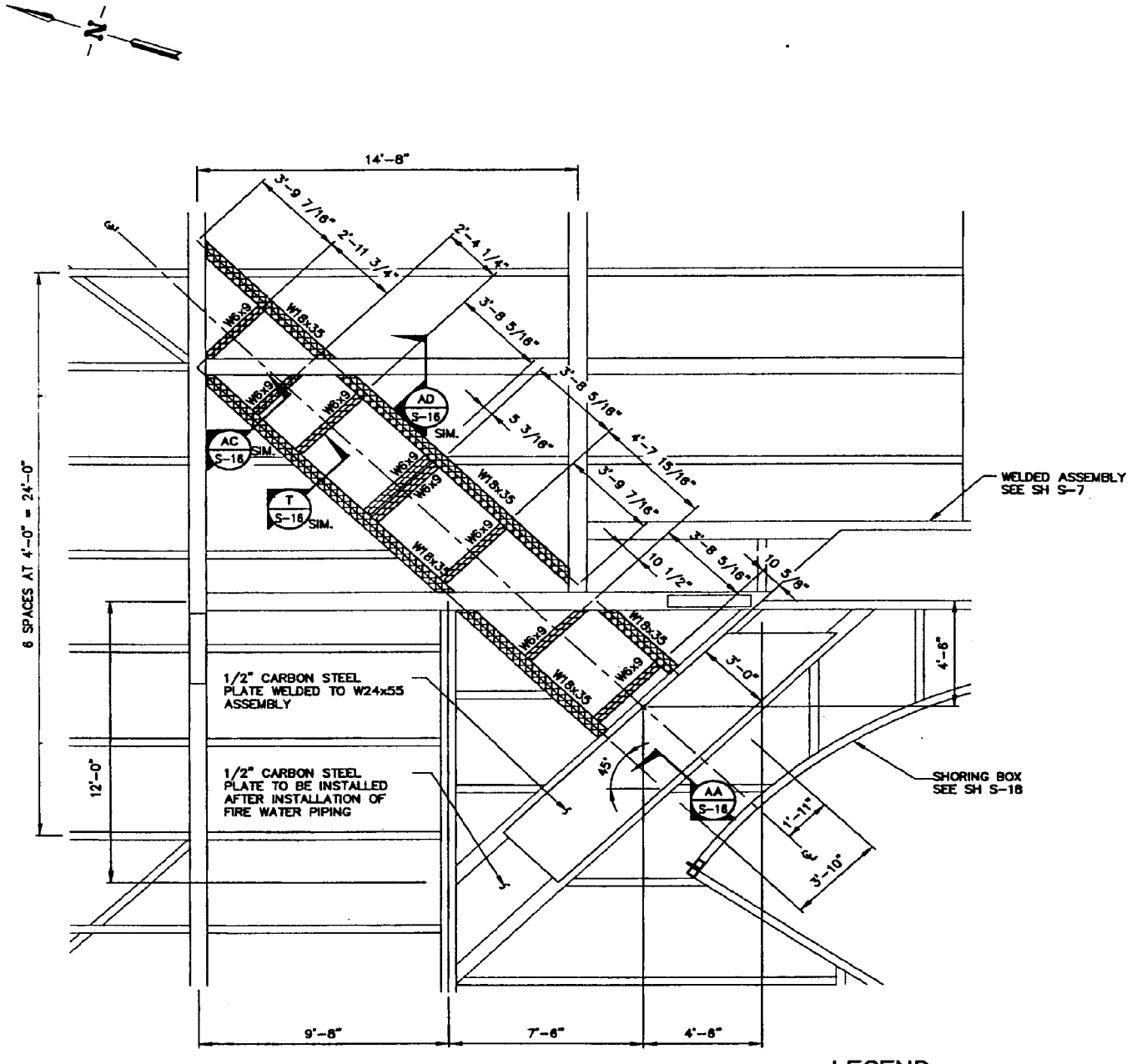
519670.dwg
519881.dwg

FOR DRAWING INDEX SEE DRAWING NO. 519907	SUBCONTRACT NO. N/A	INEEL
SCALE: 3/8" = 1'-0"	REQUESTER: S.A. DAVIES	OU 7-10 GLOVEBOX EXCAVATOR METHOD PROJECT FACILITY FLOOR STRUCTURE (FFS)
	DESIGN: S. JENSEN	
	DRAWN: B.SEARLE	LARGE SCALE UPPER FRAMING PLAN
	PROJECT NO. 021052	
	SPEC CODE	
DESIGN PHASE: AFC	FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90845	SIZE D; CAGE CODE 01MF3; DWG-519913; REV
SAFETY CATEGORY: SS	EFFECTIVE DATE: 5/10/02	SCALE: NOTED; SHEET S-6

Layout Name: S-6 Date: 05/09/02 - 2:06 P.M. ID: SEA
File: 519913.dwg Path: X:\KFC_FFS


REVISIONS
REV
DESCRIPTION
EFFECTIVE DATE:
B
68'-8"
14'-8"
42'-0"
12'-0"
19'-0"
23'-0"
W12x14
W24x94
1/2" CARBON STEEL PLATE WELDED TO BEAM AS 1 PIECE ASSEMBLY
ALL OUTER CONNECTIONS ARE BOLTED TO OTHER STEEL MEMBERS IN FIELD TYP
MOMENT CONNECTION SEE DETAIL 28 S-17
2'-0"
8'-0"
12'-0"
19'-8"
32'-0"
17'-0"
3'-0"
27'-0"
9'-5"
9'-3"
6'-0"
4'-0"
7'-0"
AT 4'-0" = 16'-0"
MOMENT CONNECTION SEE DETAIL 32 S-17
MOMENT CONNECTION SEE DETAIL 31 S-17
W24x55
2'-5 1/2"
MOMENT CONNECTION SEE DETAIL 30 S-17
1'-1 3/4"
15'-0"
7'-7 5/8"
3'-11 5/8"
1'-5"
2'-0"
30'-0"
16'-0"
5/8" CARBON STEEL PLATE WELDED TO STEEL MEMBERS AS INDICATED SEE DETAIL 30 S-17
WELD 5/8" CARBON STEEL PLATE TO STEEL MEMBERS SEE DETAIL 1
1/4
DETAIL 1
SCALE: 3/8"=1'-0"
NOTES
1. ALL PIECES DESIGNATED IN PLAN ARE TO BE WELDED IN SHOP AS ONE ASSEMBLY
2. FINISHED TOS EL 100'-0" (FINAL PLACEMENT)
FLOOR FRAMING WELDED MEMBERS
WELD STEEL MEMBER ASSEMBLIES
SCALE: 3/8"=1'-0"
LEGEND
○ — INDICATES CONNECTIONS BOLTED TO OTHER STEEL MEMBERS IN FIELD. SEE SH S-2 THRU S-5 TYP
Ⓧ — INDICATES STEEL MEMBERS SHOP FABRICATED INTO SUB-ASSEMBLIES TO BE FULLY ASSEMBLED IN THE SHOP TYP 4 PLACES
X-REF DRAWINGS
519670.dwg
519861.dwg
FOR DRAWING INDEX SEE DRAWING NO. 519907
SCALE: 3/8" = 1'-0"
DESIGN PHASE: AFC
SAFETY CATEGORY: SS
SUBCONTRACT NO. N/A
REQUESTOR: S.A. DAVIES
DESIGN: S. JENSEN
DRAWN: B.SEARLE
PROJECT NO. 021052
SPEC CODE
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90845
EFFECTIVE DATE: 5/10/02
INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)
WELDED STEEL MEMBER ASSEMBLIES
SIZE D
CAGE CODE 01MF3
098 0671 61 090
DWG-519914
SCALE: NOTED
SHEET S-7
File: 519914.dwg
Path: Y:\AFC_FFS
Layout Name: s-7
Date: 05/09/02 - 2:10 P.M.
ID: SEA

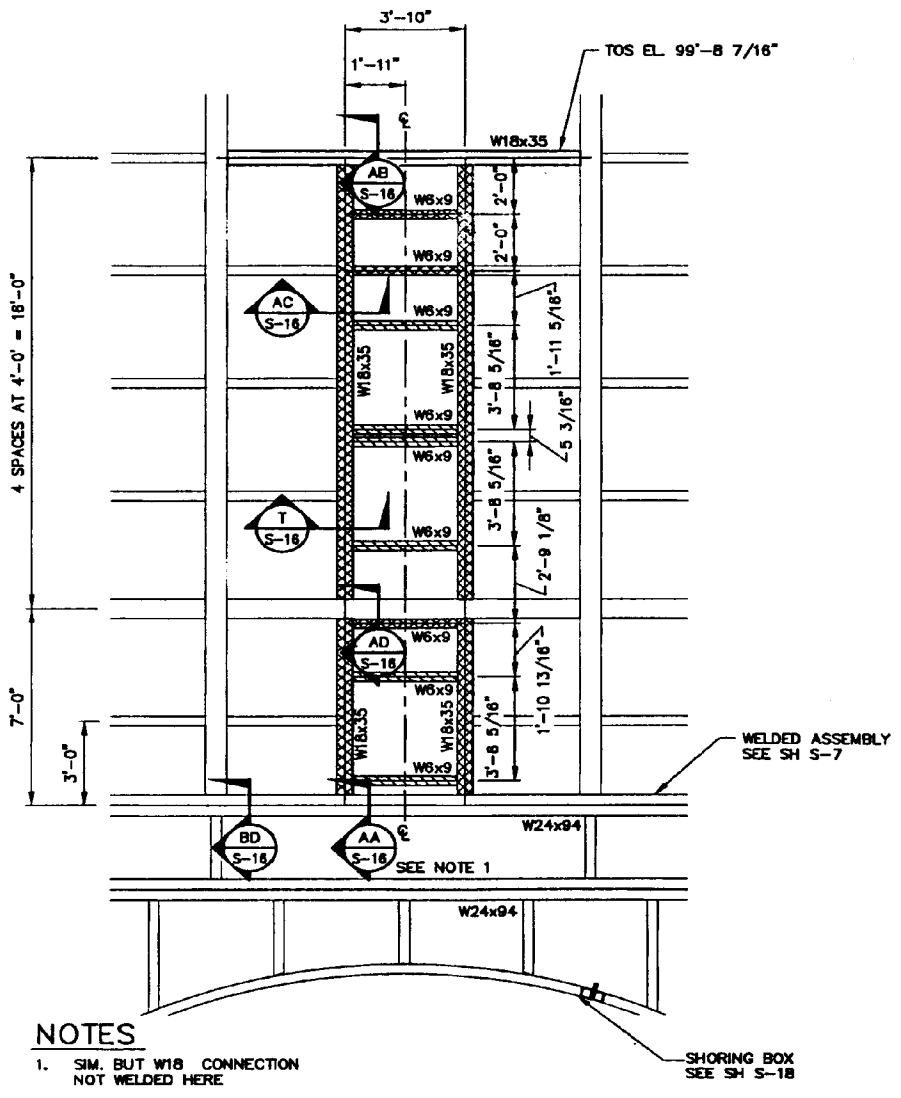
REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE



FLOOR FRAMING AROUND GLOVE BOX 1

PLAN

SCALE: 3/8"=1'-0"



NOTES

1. SIM. BUT W18 CONNECTION NOT WELDED HERE

FLOOR FRAMING AROUND GLOVE BOX 2

PLAN

SCALE: 3/8"=1'-0"

LEGEND

— INDICATES TOS AT 100'-0 7/16"

— INDICATES TOS AT 98'-6 11/16"

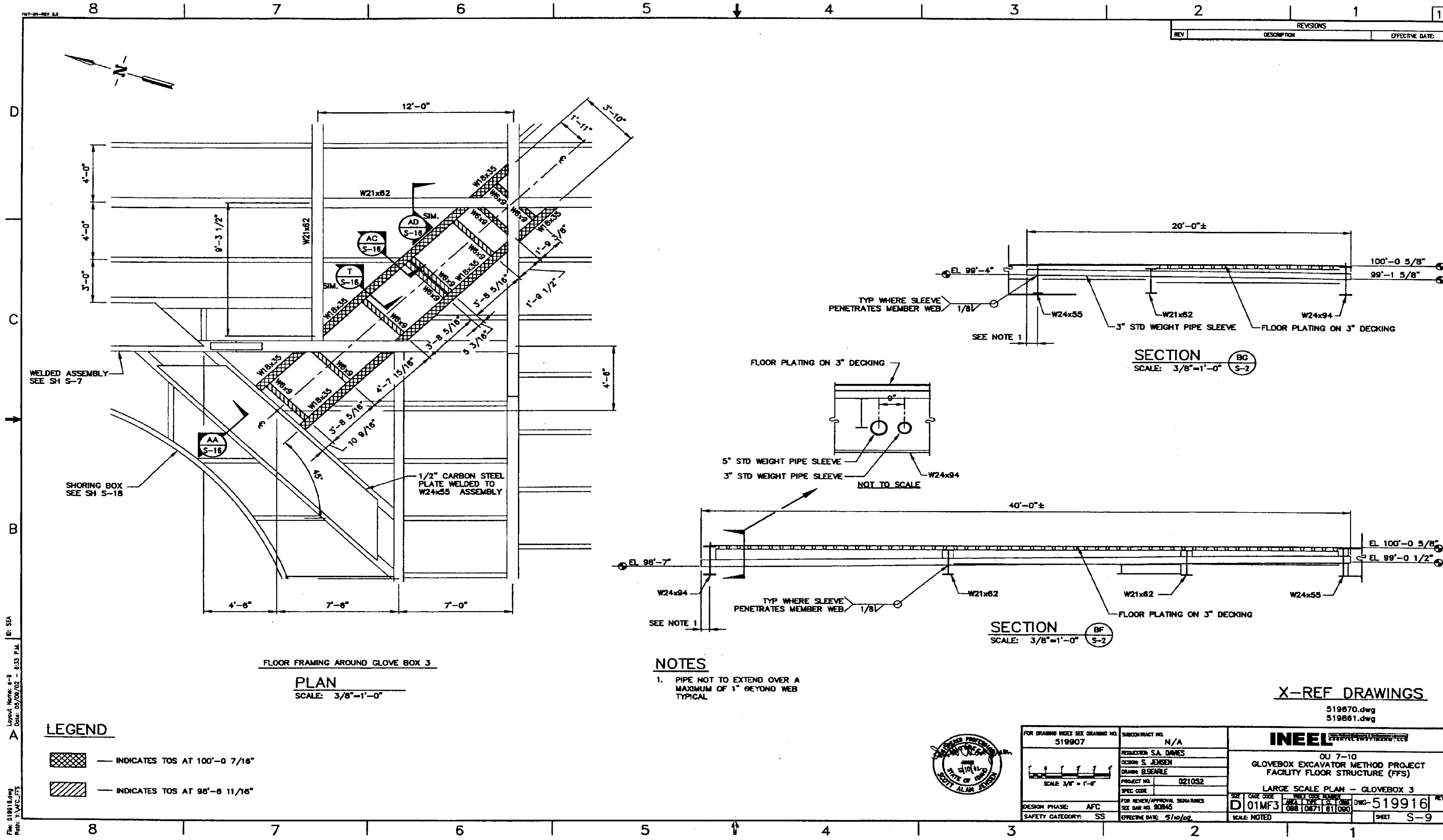
X-REF DRAWINGS

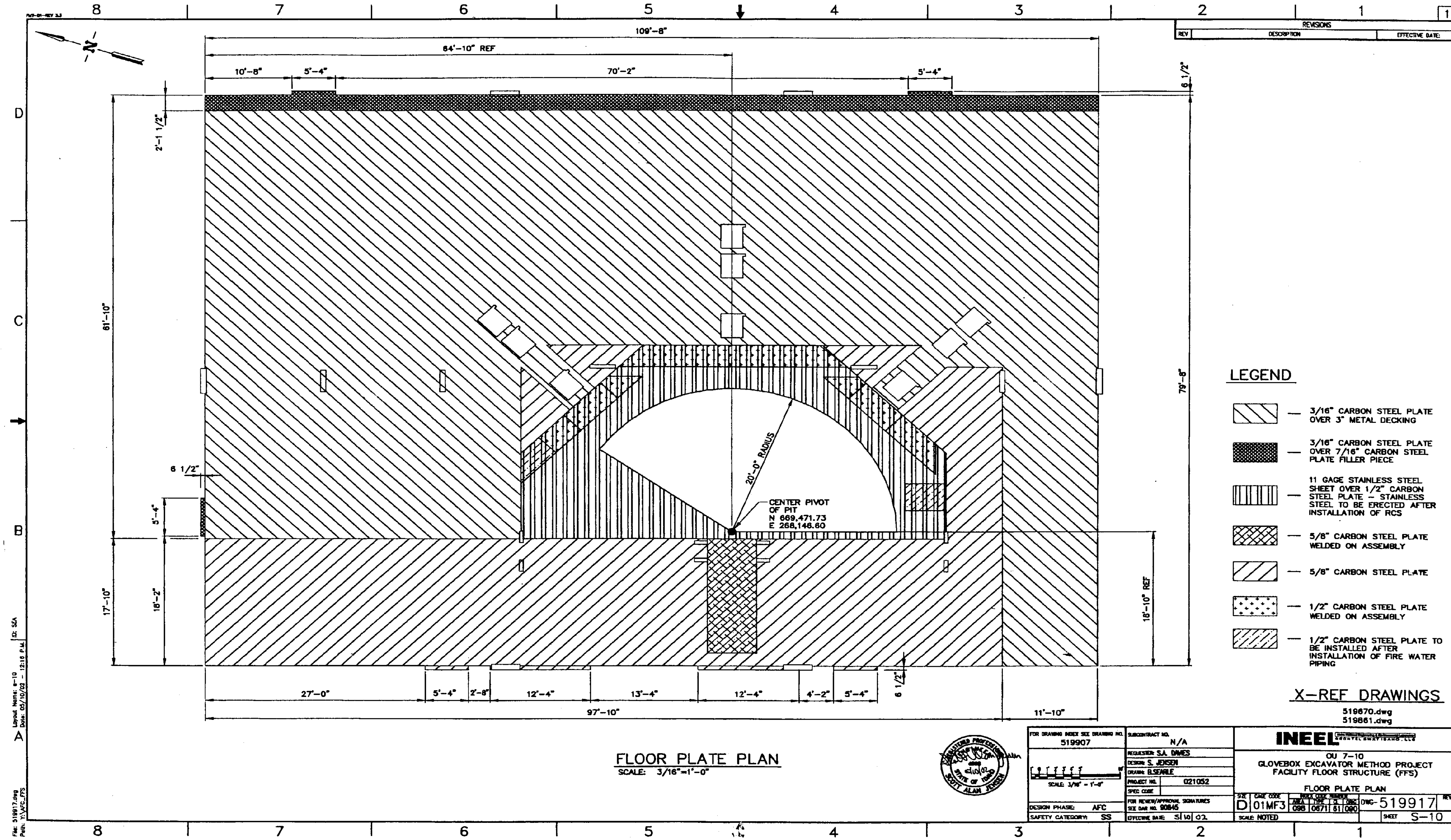
519670.dwg
519861.dwg

FOR DRAWING INDEX SEE DRAWING NO. 519907	SUBCONTRACT NO. N/A	INEEL
SCALE: 3/8" = 1'-0"	REQUESTER: S.A. DAMES	OU 7-10 GLOVEBOX EXCAVATOR METHOD PROJECT FACILITY FLOOR STRUCTURE (FFS)
	DESIGN: S. JENSEN	LARGE SCALE PLANS – GLOVEBOX 1 & 2
	DRAWN: B.SEARLE	
	PROJECT NO. 021052	
	SPEC CODE	
DESIGN PHASE: AFC	FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90845	SIZE D; CAGE CODE 01MF3; DWG NO. 519915; REV
SAFETY CATEGORY: SS	EFFECTIVE DATE: 5/10/02	SCALE: NOTED; SHEET S-8

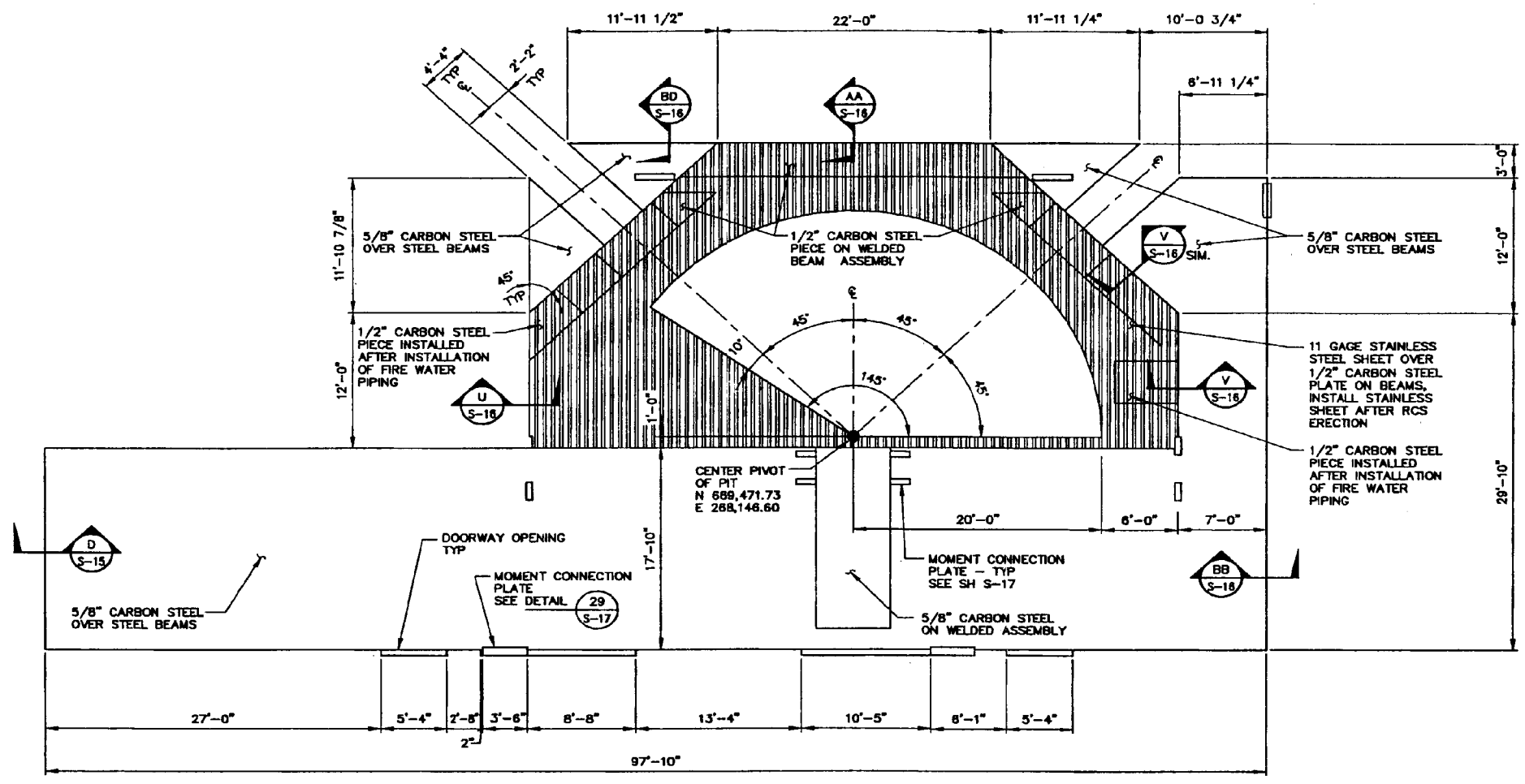
Registered Professional Engineer — Scott Alan Jensen — 5/10/02 — State of Idaho

ID: SEA
Layout Name: s-8
Date: 05/09/02 - 8:33 P.M.
File: 519915.dwg
Path: Y:\AFC_FFS


10
REVISIONS
REV
DESCRIPTION
EFFECTIVE DATE:
12'-0"
3'-10"
1'-11"
W21x62
W18x35
W6x9
SIM.
AD S-16
AC S-16
T S-16
AA S-16
4'-0"
4'-0"
3'-0"
9'-3 1/2"
1'-9 3/8"
1'-9 1/2"
3'-8 5/16"
5 3/16"
4'-7 15/16"
10 9/16"
45°
4'-6"
4'-6"
7'-6"
7'-0"
WELDED ASSEMBLY SEE SH S-7
SHORING BOX SEE SH S-18
1/2" CARBON STEEL PLATE WELDED TO W24x55 ASSEMBLY
FLOOR FRAMING AROUND GLOVE BOX 3
PLAN
SCALE: 3/8"=1'-0"
LEGEND
— INDICATES TOS AT 100'-0 7/16"
— INDICATES TOS AT 98'-6 11/16"
20'-0"±
EL 99'-4"
100'-0 5/8"
99'-1 5/8"
TYP WHERE SLEEVE PENETRATES MEMBER WEB
1/8
W24x55
W21x62
W24x94
3" STD WEIGHT PIPE SLEEVE
FLOOR PLATING ON 3" DECKING
SEE NOTE 1
SECTION
SCALE: 3/8"=1'-0"
BG S-2
FLOOR PLATING ON 3" DECKING
9"
5" STD WEIGHT PIPE SLEEVE
3" STD WEIGHT PIPE SLEEVE
W24x94
NOT TO SCALE
40'-0"±
EL 98'-7"
EL 100'-0 5/8"
EL 99'-0 1/2"
W24x94
W21x62
W21x62
W24x55
TYP WHERE SLEEVE PENETRATES MEMBER WEB
1/8
FLOOR PLATING ON 3" DECKING
SEE NOTE 1
SECTION
SCALE: 3/8"=1'-0"
BF S-2
NOTES
1. PIPE NOT TO EXTEND OVER A MAXIMUM OF 1" BEYOND WEB TYPICAL
X-REF DRAWINGS
519670.dwg
519861.dwg
FOR DRAWING INDEX SEE DRAWING NO. 519907
SCALE 3/8" = 1'-0"
DESIGN PHASE: AFC
SAFETY CATEGORY: SS
SUBCONTRACT NO. N/A
REQUESTER: S.A. DAVIES
DESIGN: S. JENSEN
DRAWN: B.SEARLE
PROJECT NO. 021052
SPEC CODE
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90845
EFFECTIVE DATE: 5/10/02
INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)
LARGE SCALE PLAN - GLOVEBOX 3
SIZE D
CAGE CODE 01MF3
AREA 098 TYPE 0671 CL 61 DWG 090
DWG-519916
REV
SCALE: NOTED
SHEET S-9
SCOTT ALAN JENSEN
STATE OF IDAHO
File: 519916.dwg
Path: Y:\AFC_FFS
Layout Name: s-9
Date: 05/09/02 - 6:33 P.M.
ID: SEA


109'-8"
84'-10" REF
10'-8"
5'-4"
70'-2"
5'-4"
6 1/2"
2'-1 1/2"
61'-10"
79'-8"
6 1/2"
5'-4"
17'-10"
18'-2"
18'-10" REF
20'-0" RADIUS
CENTER PIVOT
OF PIT
N 669,471.73
E 268,146.60
27'-0"
5'-4"
2'-8"
12'-4"
13'-4"
12'-4"
4'-2"
5'-4"
6 1/2"
97'-10"
11'-10"
REVISIONS
REV
DESCRIPTION
EFFECTIVE DATE:
11
LEGEND
3/16" CARBON STEEL PLATE OVER 3" METAL DECKING
3/16" CARBON STEEL PLATE OVER 7/16" CARBON STEEL PLATE FILLER PIECE
11 GAGE STAINLESS STEEL SHEET OVER 1/2" CARBON STEEL PLATE – STAINLESS STEEL TO BE ERECTED AFTER INSTALLATION OF RCS
5/8" CARBON STEEL PLATE WELDED ON ASSEMBLY
5/8" CARBON STEEL PLATE
1/2" CARBON STEEL PLATE WELDED ON ASSEMBLY
1/2" CARBON STEEL PLATE TO BE INSTALLED AFTER INSTALLATION OF FIRE WATER PIPING
X-REF DRAWINGS
519670.dwg
519661.dwg
FLOOR PLATE PLAN
SCALE: 3/16"=1'-0"
FOR DRAWING INDEX SEE DRAWING NO. 519907
SCALE: 3/16" = 1'-0"
DESIGN PHASE: AFC
SAFETY CATEGORY: SS
SUBCONTRACT NO. N/A
REQUESTER: S.A. DAVIES
DESIGN: S. JENSEN
DRAWN: B.SEARLE
PROJECT NO. 021052
SPEC CODE
FOR REVIEW/APPROVAL SIGNATURES
SEE DAR NO. 90845
EFFECTIVE DATE: 5/10/02
INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)
FLOOR PLATE PLAN
SIZE D
CAGE CODE 01MF3
INDEX CODE NUMBER
AREA 098
TYPE 0671
CL 61
DISC 090
DWG-519917
REV
SCALE: NOTED
SHEET S-10
SCOTT ALAN JENSEN
STATE OF IDAHO
File: 519917.dwg
Path: Y:\AFC_FFS
Layout Name: s-10
Date: 05/10/02 - 12:16 P.M.
ID: SEA

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE

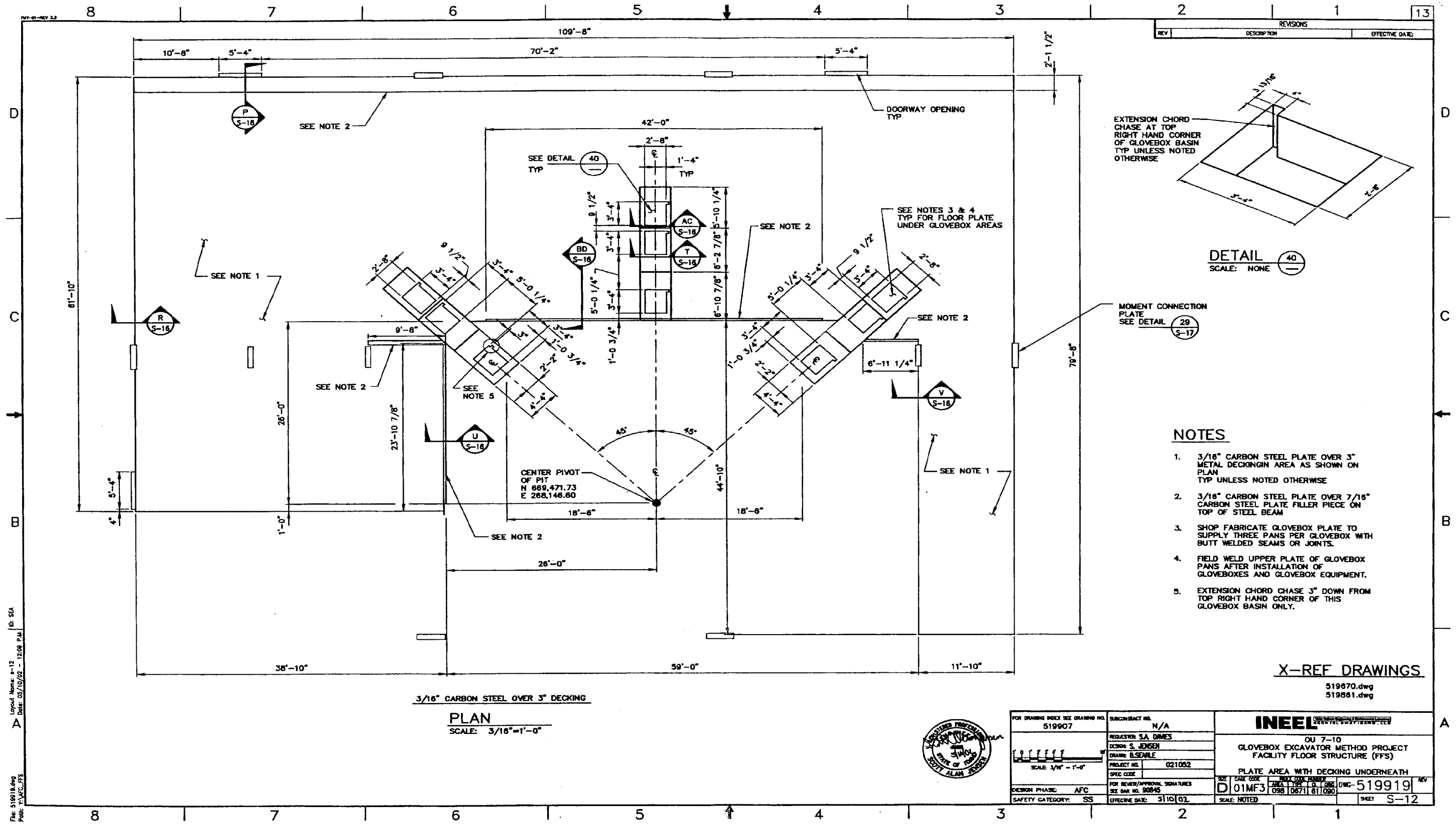


PLAN
SCALE: 3/16"=1'-0"

X-REF DRAWINGS
519870.dwg
519861.dwg

FOR DRAWING INDEX SEE DRAWING NO. 519907	SUBCONTRACT NO. N/A	INEEL
SCALE: 3/16" = 1'-0"	ROBERTSON S.A. DAMES	OU 7-10 GLOVEBOX EXCAVATOR METHOD PROJECT FACILITY FLOOR STRUCTURE (FFS)
	DESIGN S. JOHNSON	
	DRAWN B.SEARLE	PLATE AREA WITHOUT DECKING UNDERNEATH
	PROJECT NO. 021052	
	SPEC CODE	SIZE D | CAGE CODE 01MF3 | INDEX CODE NUMBER 086 | 0671 | 01 | 090 | DWG-519918 | REV A
DESIGN PHASE: AFC	FOR REVIEW/APPROVAL SIGNATURES	
SAFETY CATEGORY: SS	SEE DWG NO. 519945	SCALE: NOTED | SHEET S-11
	EFFECTIVE DATE: 5/10/02	

PROFESSIONAL ENGINEER SCOTT ALAN JENSEN STATE OF IDAHO 5/10/02



3/16" CARBON STEEL OVER 3" DECKING

PLAN

SCALE: 3/16"=1'-0"

DETAIL 40

SCALE: NONE

NOTES

1. 3/16" CARBON STEEL PLATE OVER 3" METAL DECKINGIN AREA AS SHOWN ON PLAN TYP UNLESS NOTED OTHERWISE
2. 3/16" CARBON STEEL PLATE OVER 7/16" CARBON STEEL PLATE FILLER PIECE ON TOP OF STEEL BEAM
3. SHOP FABRICATE GLOVEBOX PLATE TO SUPPLY THREE PANS PER GLOVEBOX WITH BUTT WELDED SEAMS OR JOINTS.
4. FIELD WELD UPPER PLATE OF GLOVEBOX PANS AFTER INSTALLATION OF GLOVEBOXES AND GLOVEBOX EQUIPMENT.
5. EXTENSION CHORD CHASE 3" DOWN FROM TOP RIGHT HAND CORNER OF THIS GLOVEBOX BASIN ONLY.

X-REF DRAWINGS

519670.dwg
519681.dwg

REVISIONS

REV	DESCRIPTION	EFFECTIVE DATE

FOR DRAWING INDEX SEE DRAWING NO.	519907
SCALE: 1/16" = 1'-0"	
DESIGN PHASE:	AFC
SAFETY CATEGORY:	SS
SUBCONTRACT NO.	N/A
REQUESTER: S.A. DAMES	
DESIGN: S. JENSEN	
DRAWN: R.SEARLE	
PROJECT NO.	021052
SPEC CODE	
FOR REVIEW/APPROVAL SIGNATURES SEE BAR NO. 90845	
EFFECTIVE DATE:	5/10/02

INEEL

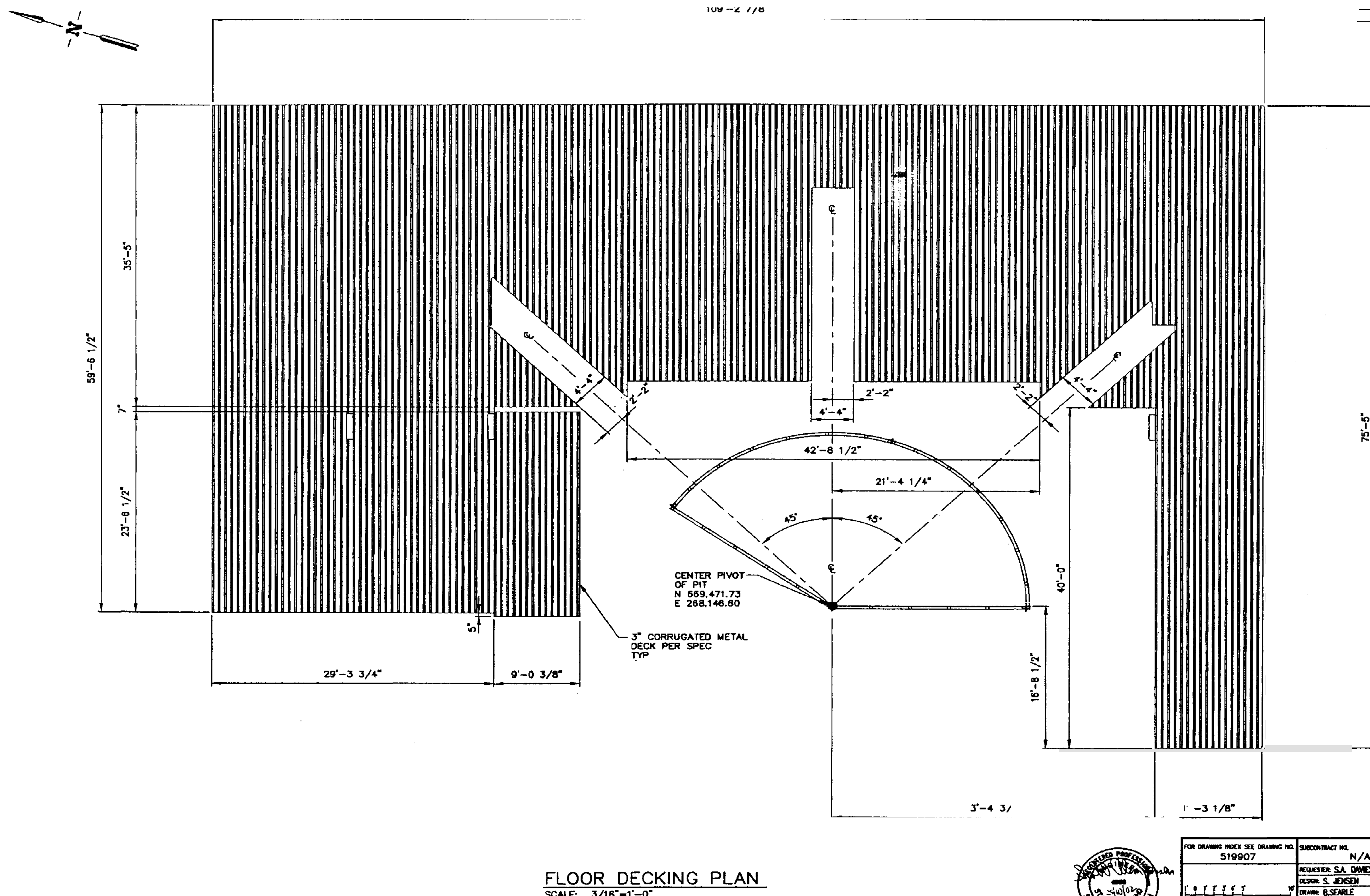
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)

PLATE AREA WITH DECKING UNDERNEATH

SIZE	CAGE CODE	BLOCK CODE NUMBER: AREA	TYPE	D	DRC	DWG-	REV
D	01MF3	098	0671	61	090	519919	

SCALE: NOTED — SHEET S-12

ID: SEA
Layout Name: s-12
Date: 05/10/02 - 12:08 P.M.
File: 519919.dwg
Path: H:\AFC_FFS



FLOOR DECKING PLAN
SCALE: 3/16"=1'-0"

X-REF DRAWINGS
519670.dwg
519861.dwg

FOR DRAWING INDEX SEE DRAWING NO.	519907
SCALE: 3/16" = 1'-0"	
DESIGN PHASE:	AFC
SAFETY CATEGORY:	SS
SUBCONTRACT NO.	N/A
REQUESTER	S.A. DAVIES
DESIGN	S. JENSEN
DRAWN	B.SEARLE
PROJECT NO.	021052
SPEC CODE	
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO.	90645
EFFECTIVE DATE	5/10/02

INEEL

OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)

FLOOR DECKING PLAN

SIZE	CAGE CODE	AREA	TYPE	CL	DISC	DWG-	REV
D	01MF3	098	0671	61	090	519920	

SCALE: NONE — SHEET S-13

SCOTT ALAN JENSEN — STATE OF IDAHO — 5/10/02

File: 519920.dwg
Path: Y:\AFC_FFS
Layout Name: s-13
Date: 05/09/02 - 7:50 P.M.
ID: SEA

SHEAR CONNECTION SCHEDULE

SECTION CALLOUTS	BEAM SIZE	JOINT TYPE	MIN. BOLT DIAMETER	HOLE TYPE	CONNECTION TYPE	DESIGN SERVICE LOADS	CONNECTS TO	NOTES
T	W8 X 9	ST	5/8	STD OR SSLT	SHEAR	2 KIPS	W18 X 35, W12 X 14, W24 X 94, W24 X 55	SINGLE SHEAR CONNECTION
AE, AF, AG	W8 X 13	PT	5/8"	STD	AXIAL	12.5 KIPS	W24 X 94, W21 X 62	
G,H,J,K,AC BA,R,BB,T,U,V	W12 X 14	ST	5/8	STD OR SSLT	SHEAR	14 KIPS	W24 X 94, W24 X55, W21 X62 & W12 X14	SINGLE SHEAR CONNECTION
AH & DET. 1	W12 X 14	ST	3/4	SSLT	SHEAR	N/A	SHORING BOX	SEE DESIGN DETAILS
D,F,G	W12 X 16	ST	5/8	STD OR SSLT	SHEAR	14 KIPS	W24 X 94, W21 X 62	SINGLE SHEAR CONNECTION
L,M,N	W12 X 45	ST	3/4	STD OR SSLT	SHEAR	27 KIPS	W24 X 94, W24 X 55, W12 X 45	
AA, AB, AD	W18 X 35	ST	3/4	STD OR SSLT	SHEAR	28 KIPS	W24 X 55	
B,E,BD	W21 X 62	ST	3/4	STD OR SSLT	SHEAR	35 KIPS	W24 X 94, W24 X 55	
E	W24 X 55	ST	3/4	STD OR SSLT	SHEAR	53 KIPS	W24 X 94, W21 X 62	W24X55'S PARALLEL TO FLOOR EDGE
J,Y	W24 X 55	ST	3/4	STD OR SSLT	SHEAR	90 KIPS	W24 X 94, W24 X 55 & W21 X 62	DOUBLE SHEAR CONNECTION
A,BC	W24 X 94	ST	3/4	STD OR SSLT	SHEAR	102 KIPS	W24 X 94, W21 X 62	DOUBLE SHEAR CONNECTION

STD – STANDARD HOLE
SSLT – SHORT–SLOTTED HOLES ORIENTED TRANSVERSE TO DIRECTION OF LOAD

ST – SNUG–TIGHTENED
PT – PRETENSIONED
SC – SLIP CRITICAL

N/A – NOT APPLICABLE

ALL BOLTS SHALL BE ASTM A325 TYPE 1 UNLESS NOTED OTHERWISE WELD ELECTRODES SHALL BE E70XX UNLESS NOTED OTHERWISE

ALL SLIP CRITICAL JOINTS SHALL HAVE CLASS A SURFACES THE SLIP OF SLIP CRITICAL JOINTS SHALL BE CHECKED FOR SERVICE–LOAD CONDITIONS

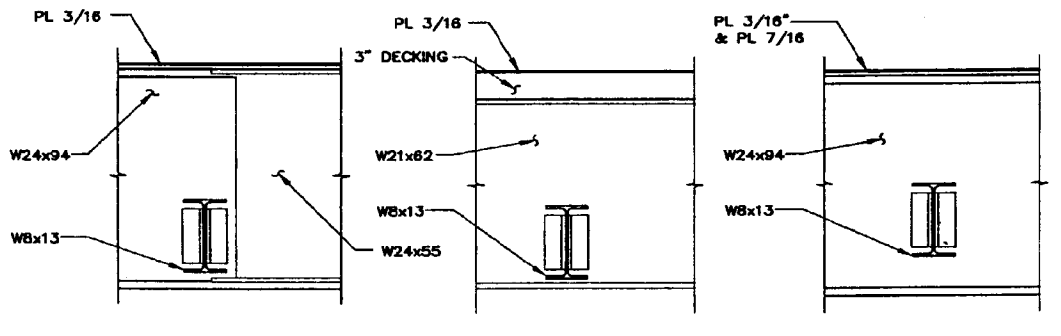
ALL JOINTS SHALL HAVE AT LEAST TWO BOLTS PER CONNECTION

SEE S–3 THRU S–7 FOR BEAM PLANS

SEE S–15 THRU S–19 FOR SECTIONS

STEEL FABRICATOR SHALL DESIGN ALL DETAILS FOR CONNECTIONS IN THIS SCHEDULE UNLESS NOTED OTHERWISE

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE:



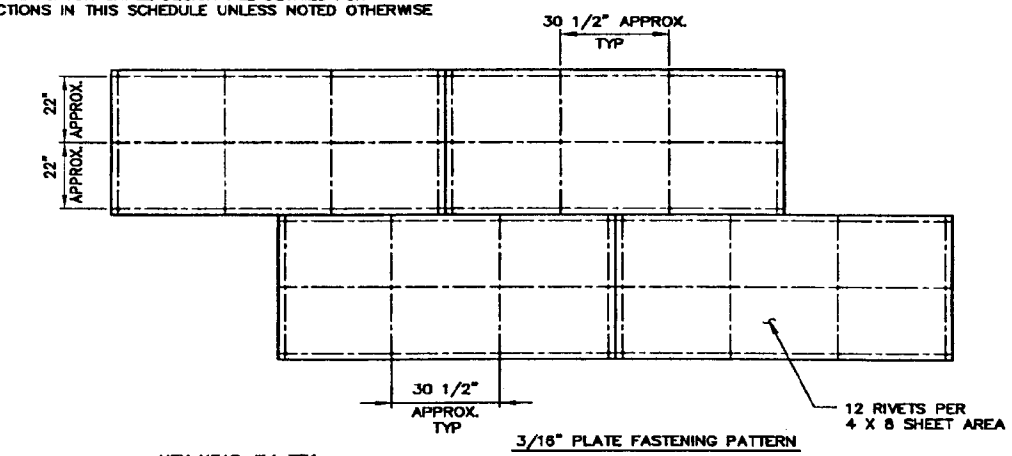
SECTION (AE) SCALE: 1 1/2"=1'–0" (S–2)

SECTION (AF) SCALE: 1 1/2"=1'–0" (S–2)

SECTION (AG) SCALE: 1 1/2"=1'–0" (S–2)

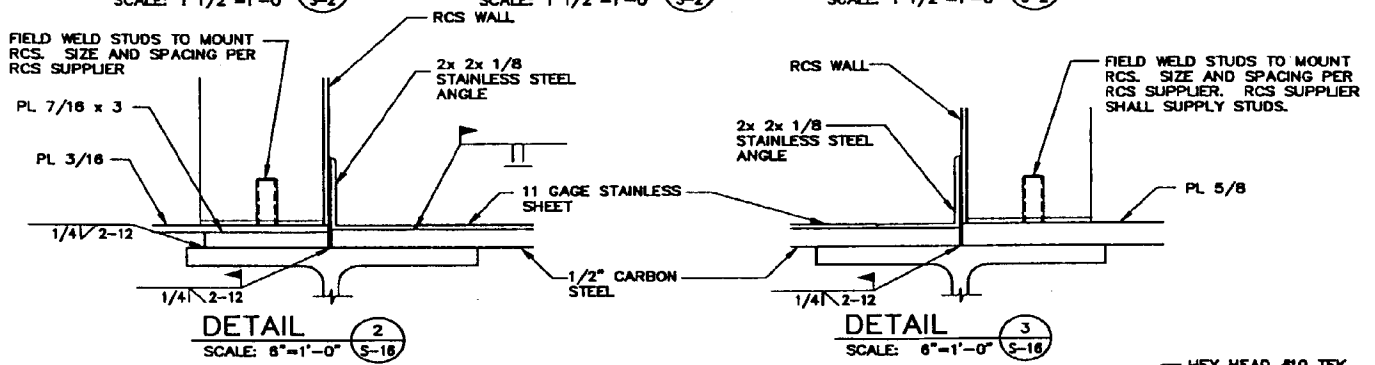
NOTES

1. HEX HEAD SCREWS MY BE USED ON FLOOR PLATES NEAD BUILDING EDGDE AWAY FROM POSSIBLE TRAFFIC



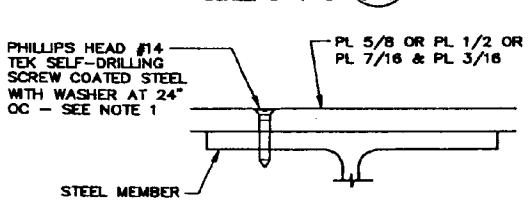
3/16" PLATE FASTENING PATTERN

DETAIL (5) SCALE: 1/2"=1'–0"

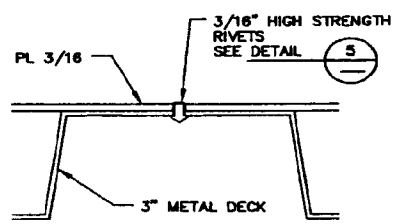


DETAIL (2) SCALE: 6"=1'–0" (S–16)

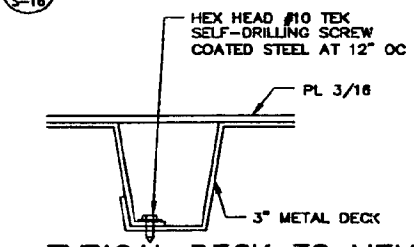
DETAIL (3) SCALE: 6"=1'–0" (S–16)



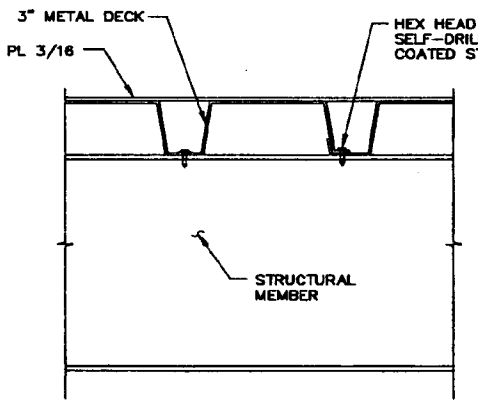
TYPICAL PLATE TO MEMBER CONNECTION DETAIL
SCALE: 6"=1'–0"



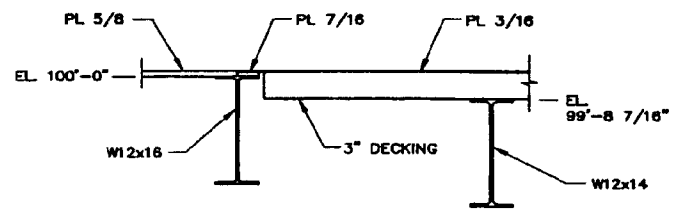
TYPICAL PLATE TO DECK CONNECTION DETAIL
SCALE: 6"=1'–0"



TYPICAL DECK TO MEMBER CONNECTION DETAIL
SCALE: 6"=1'–0"



TYPICAL DECK TO MEMBER CONNECTION DETAIL
SCALE: 3"=1'–0"



SECTION (BE) SCALE: 1 1/2"=1'–0" (S–2)

FOR DRAWING INDEX SEE DRAWING NO.	519907
SCALE 1 1/2" = 1'–0"	
SCALE 6" = 1'–0"	
DESIGN PHASE:	AFC
SAFETY CATEGORY:	SS
SUBCONTRACT NO.	N/A
REQUESTER:	S.A. DAMES
DESIGN:	S. JENSEN
DRAWN:	B.SEARLE
PROJECT NO.	021052
SPEC CODE	
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO.	90845
EFFECTIVE DATE:	6/10/02

INEEL
OU 7–10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)
SECTIONS, DETAILS AND SCHEDULE

SIZE	CADE CODE	WBS/TASK NUMBER AREA	TYPE	FA	ORG	DWG–519921	REV
D	01MF3	098	9471	61	090		
SCALE: NOTED						SHEET S–14	

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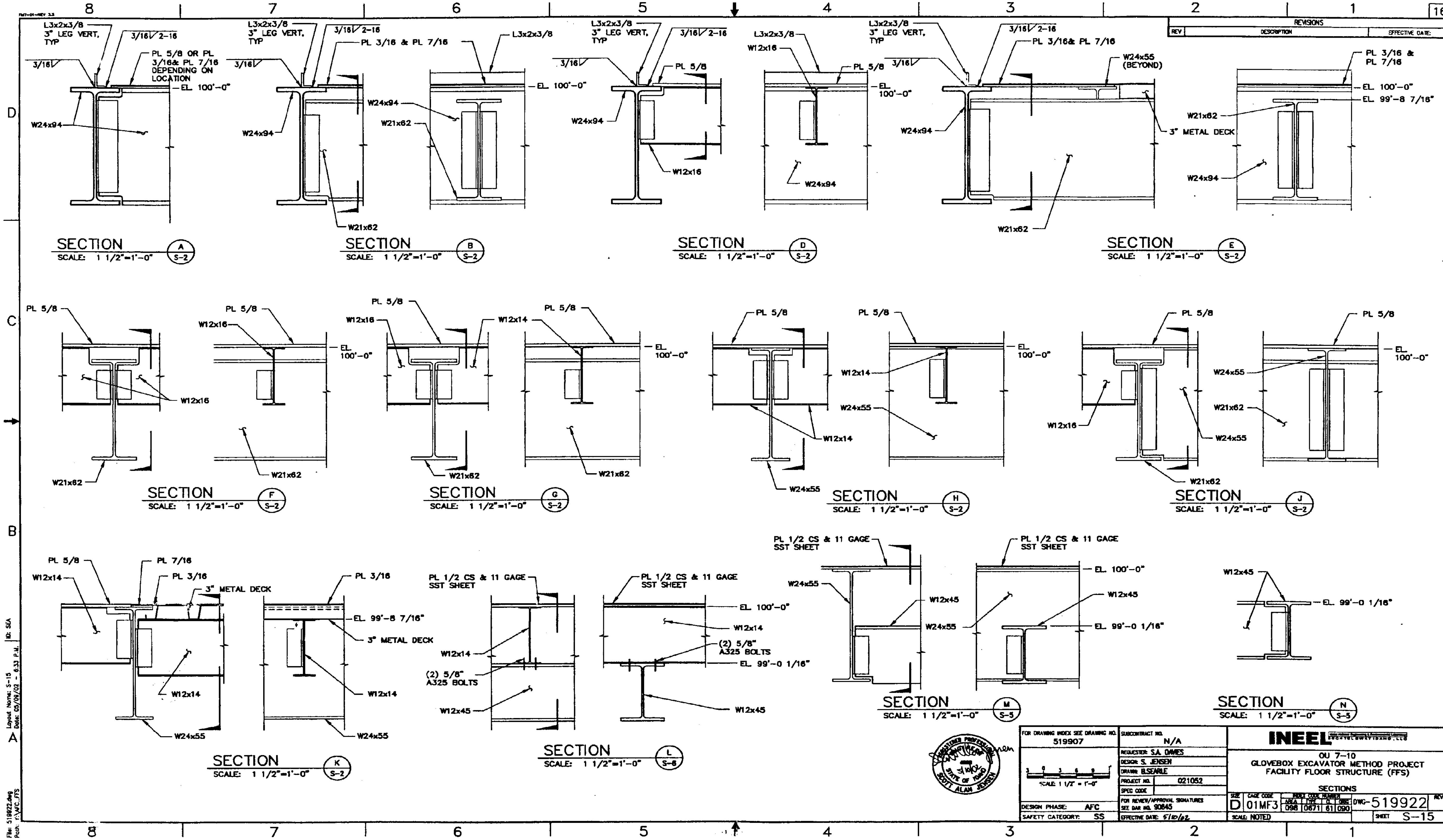
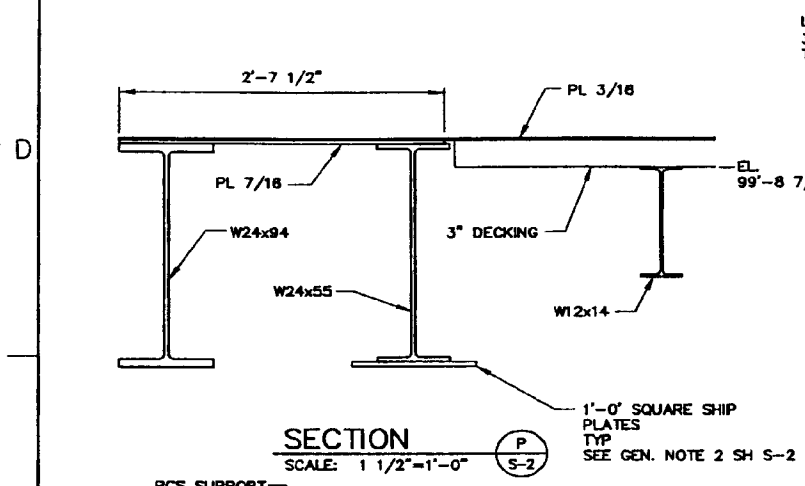
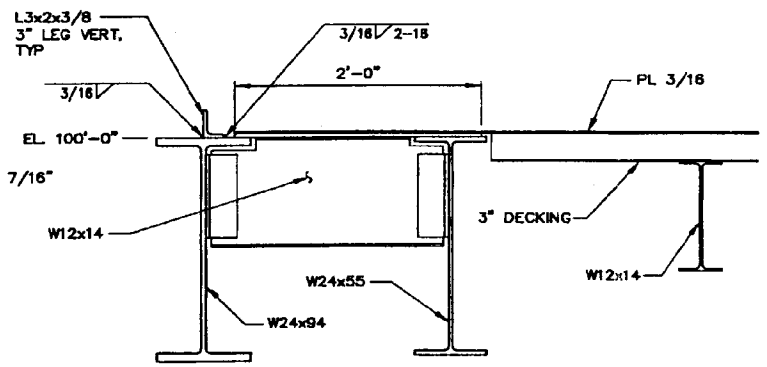
Path: Y:\AFC_FFS
Layout Name: S–14
Date: 05/09/02 – 5:56 P.M.
ID: SDA

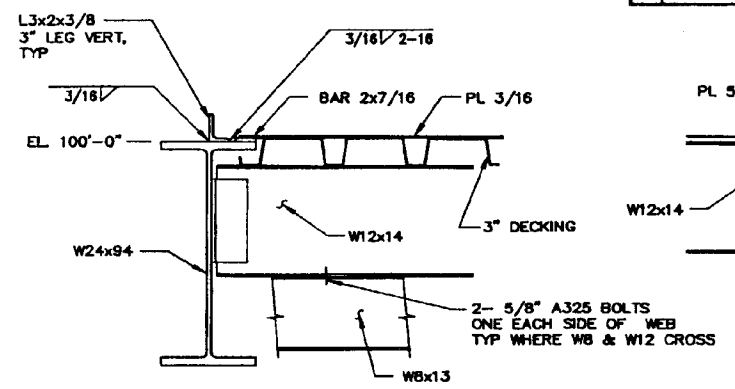

SECTION A S-2
SCALE: 1 1/2"=1'-0"
L3x2x3/8 3" LEG VERT, TYP
3/16 2-16
PL 5/8 OR PL 3/16& PL 7/16 DEPENDING ON LOCATION
EL 100'-0"
W24x94
SECTION B S-2
SCALE: 1 1/2"=1'-0"
PL 3/16 & PL 7/16
L3x2x3/8
W21x62
SECTION D S-2
SCALE: 1 1/2"=1'-0"
PL 5/8
W12x16
SECTION E S-2
SCALE: 1 1/2"=1'-0"
W24x55 (BEYOND)
3" METAL DECK
PL 3/16 & PL 7/16
EL 99'-8 7/16"
SECTION F S-2
SCALE: 1 1/2"=1'-0"
SECTION G S-2
SCALE: 1 1/2"=1'-0"
W12x14
SECTION H S-2
SCALE: 1 1/2"=1'-0"
W24x55
SECTION J S-2
SCALE: 1 1/2"=1'-0"
SECTION K S-2
SCALE: 1 1/2"=1'-0"
PL 7/16
PL 3/16
SECTION L S-6
SCALE: 1 1/2"=1'-0"
PL 1/2 CS & 11 GAGE SST SHEET
(2) 5/8" A325 BOLTS
W12x45
EL 99'-0 1/16"
SECTION M S-5
SCALE: 1 1/2"=1'-0"
SECTION N S-5
SCALE: 1 1/2"=1'-0"
REVISIONS
REV
DESCRIPTION
EFFECTIVE DATE:
16
FOR DRAWING INDEX SEE DRAWING NO. 519907
SCALE 1 1/2" = 1'-0"
DESIGN PHASE: AFC
SAFETY CATEGORY: SS
SUBCONTRACT NO. N/A
REQUESTER S.A. DAWES
DESIGN S. JENSEN
DRAWN B.SEARLE
PROJECT NO. 021052
SPEC CODE
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90845
EFFECTIVE DATE 5/10/02
INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)
SECTIONS
SIZE D
CAGE CODE 01MF3
INDEX CODE NUMBER AREA 098 TYPE 0671 C 61 OBJ 090
DWG-519922
REV
SCALE NOTED
SHEET S-15
SCOTT ALAN JENSEN STATE OF IDAHO
Layout Name: S-15
Date: 05/08/02 - 6:33 P.M.
ID: SEA
File: 519922.dwg
Path: Y:\AFC_FFS



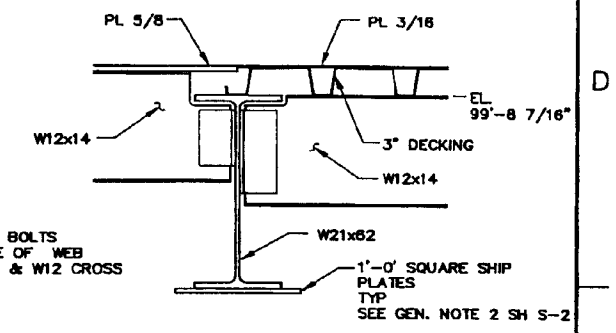
SECTION P S-2
SCALE: 1 1/2"=1'-0"



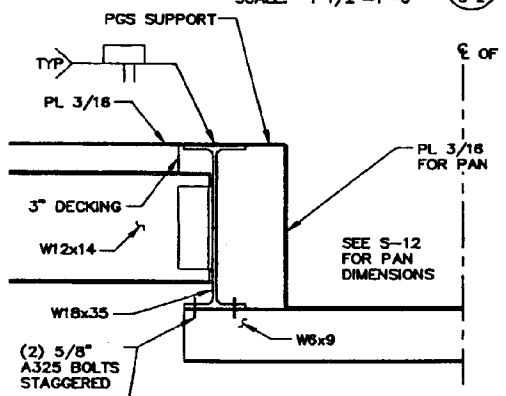
SECTION BA S-2
SCALE: 1 1/2"=1'-0"

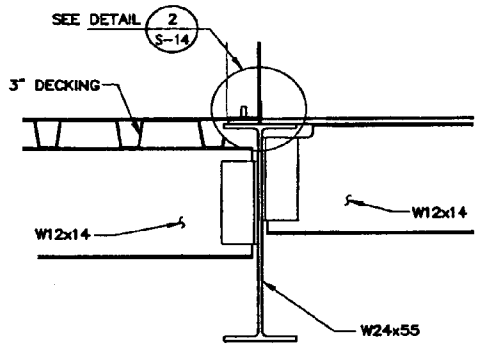


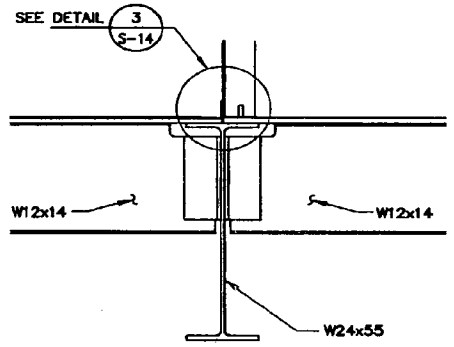
SECTION R S-2
SCALE: 1 1/2"=1'-0"

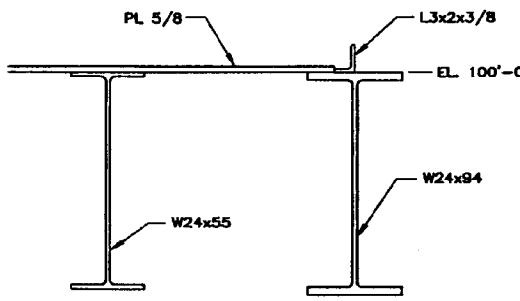


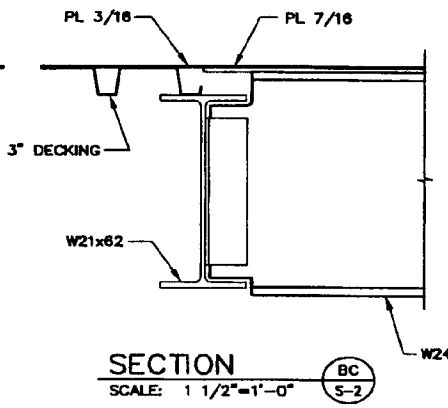
SECTION BB S-2
SCALE: 1 1/2"=1'-0"





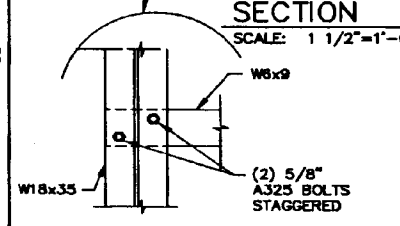






SECTION W S-2
SCALE: 1 1/2"=1'-0"

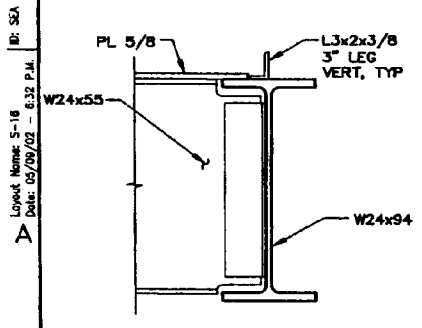
SECTION BC S-2
SCALE: 1 1/2"=1'-0"



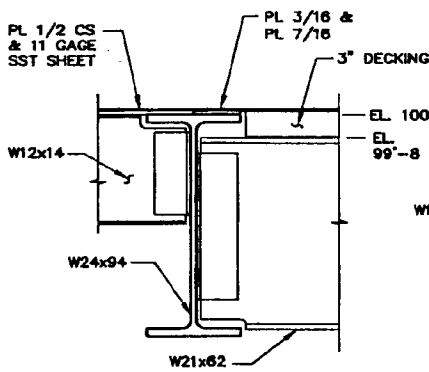
SECTION T T S-8 S-9
SCALE: 1 1/2"=1'-0"

SECTION U S-2
SCALE: 1 1/2"=1'-0"

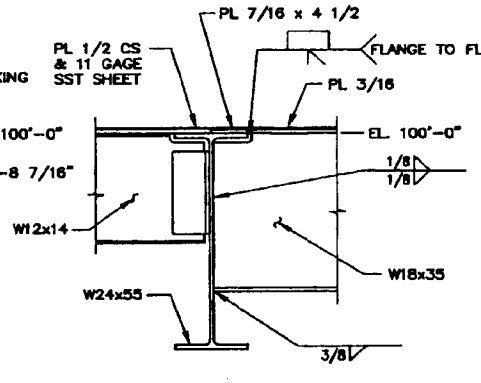
SECTION V S-2
SCALE: 1 1/2"=1'-0"



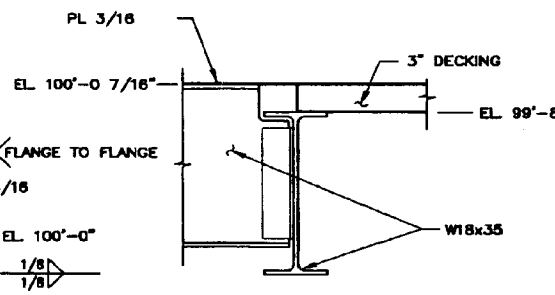
SECTION Y S-2
SCALE: 1 1/2"=1'-0"



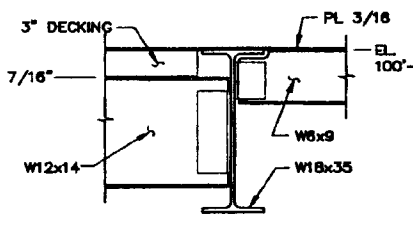
SECTION BD BD BD S-2 S-8 S-9
SCALE: 1 1/2"=1'-0"



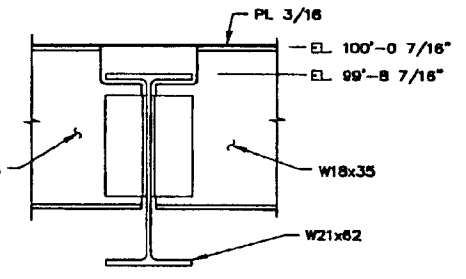
SECTION AA AA S-8 S-9
SCALE: 1 1/2"=1'-0"



SECTION AB S-8
SCALE: 1 1/2"=1'-0"



SECTION AC AC S-8 S-9
SCALE: 1 1/2"=1'-0"



SECTION AD AD S-8 S-9
SCALE: 1 1/2"=1'-0"

FOR DRAWING INDEX SEE DRAWING NO.	519907
SUBCONTRACT NO.	N/A
REQUESTER: S.A. DAVIES	
DESIGN: S. JENSEN	
DRAWN: B.SEARLE	
PROJECT NO.	021052
SPEC CODE	
FOR REVIEW/APPROVAL SIGNATURES SEE DWG NO. 90845	
EFFECTIVE DATE: 5/10/02	
DESIGN PHASE:	AFC
SAFETY CATEGORY:	SS

SCALE: 1 1/2" = 1'-0"

INEEL
Lockheed Martin Idaho Technologies Company

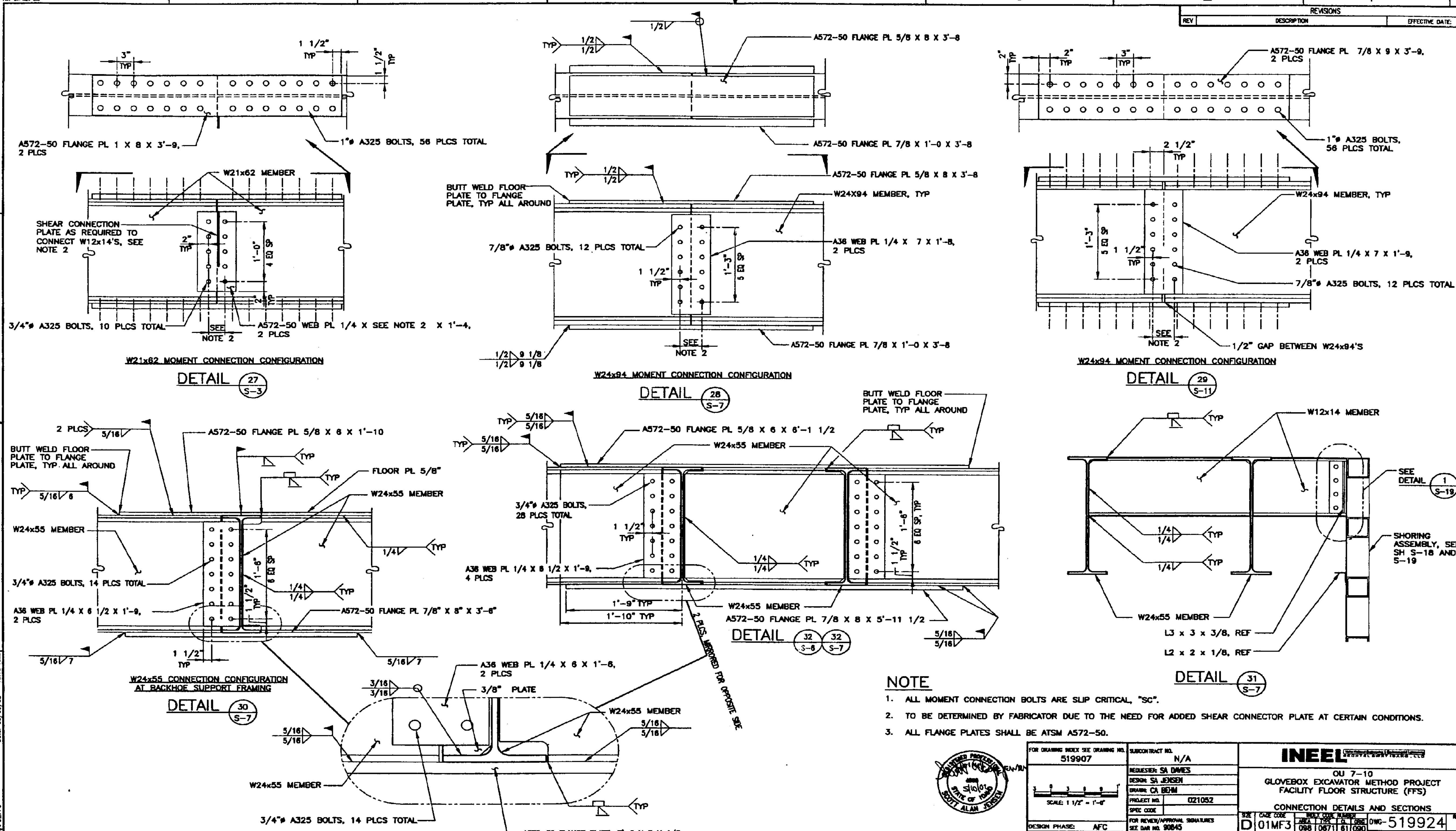
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)

SECTIONS

SIZE	CAGE CODE	WORK ORDER NUMBER				DWG	REV
		AREA	TYP	SI	TASK		
D	01MF3	096	0671	61	090	519923	

SCALE: NOTED — SHEET S-16

Plot: 519923.dwg
Path: Y:\AFC_FFS
ID: SEA
Layout Name: S-16
Date: 05/09/02 - 8:32 P.M.



NOTE

1. ALL MOMENT CONNECTION BOLTS ARE SLIP CRITICAL, "SC".
2. TO BE DETERMINED BY FABRICATOR DUE TO THE NEED FOR ADDED SHEAR CONNECTOR PLATE AT CERTAIN CONDITIONS.
3. ALL FLANGE PLATES SHALL BE ATSM A572-50.

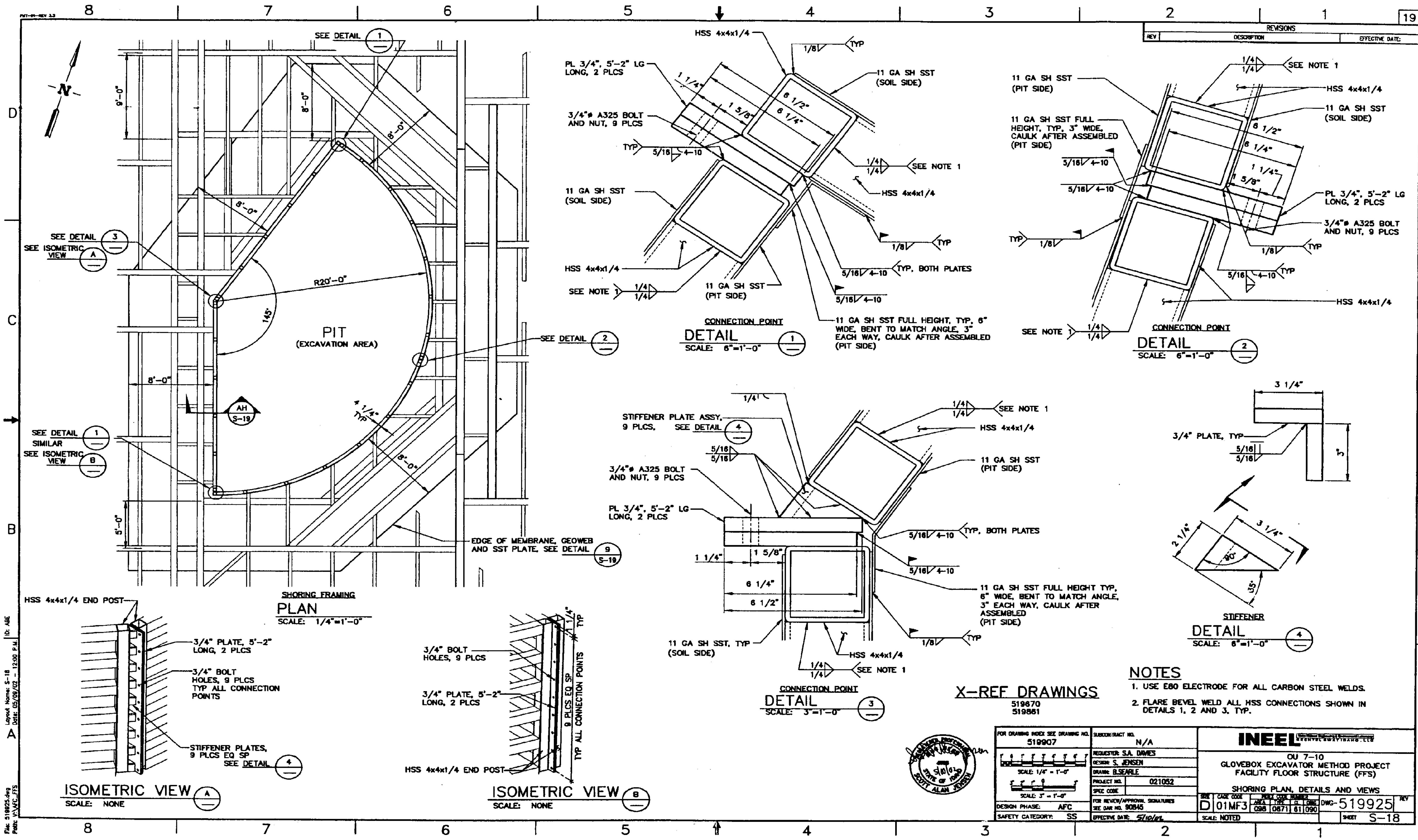
FOR DRAWING INDEX SEE DRAWING NO.	519907
SUBCONTRACT NO.	N/A
REQUESTER	SA DAVIES
DESIGN	SA JENSEN
DRAWN	CA BEHM
PROJECT NO.	021052
SCALE	1 1/2" = 1'-0"
DESIGN PHASE	AFC
SAFETY CATEGORY	SS
SEE DAR NO.	90845
EFFECTIVE DATE	5/10/02

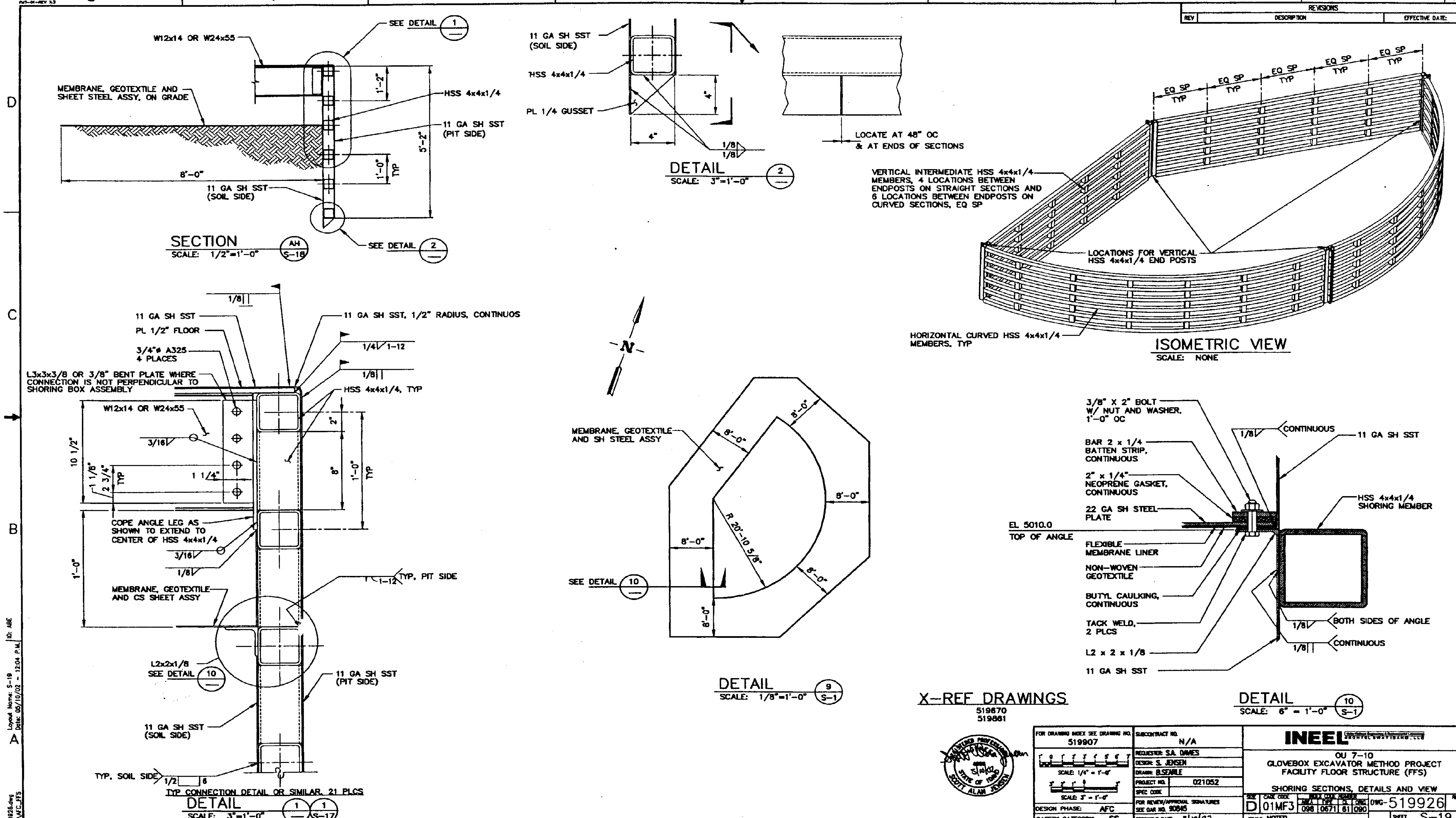
INEEL

OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)
CONNECTION DETAILS AND SECTIONS

SIZE D · CAGE CODE 01MF3 · INDEX CODE NUMBER 098 0671 61 090 · DWG-519924 · SCALE 1 1/2" = 1'-0" · SHEET S-17

Layout Name: S-17 Date: 05/09/02 - 10:10 A.M. ID: ABE
File: 519924.dwg Path: V:\AFC_FFS


SHORING FRAMING
PLAN
SCALE: 1/4"=1'-0"
PIT
(EXCAVATION AREA)
R20'-0"
145°
8'-0"
9'-0"
5'-0"
SEE DETAIL 1
SEE DETAIL 2
SEE DETAIL 3
SEE ISOMETRIC VIEW A
SEE DETAIL 1 SIMILAR
SEE ISOMETRIC VIEW B
AH S-19
EDGE OF MEMBRANE, GEOWEB AND SST PLATE, SEE DETAIL 9 S-19
CONNECTION POINT
DETAIL 1
SCALE: 6"=1'-0"
HSS 4x4x1/4
PL 3/4", 5'-2" LG LONG, 2 PLCS
3/4"ø A325 BOLT AND NUT, 9 PLCS
11 GA SH SST (SOIL SIDE)
11 GA SH SST (PIT SIDE)
11 GA SH SST FULL HEIGHT, TYP, 6" WIDE, BENT TO MATCH ANGLE, 3" EACH WAY, CAULK AFTER ASSEMBLED (PIT SIDE)
SEE NOTE 1
TYP, BOTH PLATES
CONNECTION POINT
DETAIL 2
SCALE: 6"=1'-0"
11 GA SH SST FULL HEIGHT, TYP, 3" WIDE, CAULK AFTER ASSEMBLED (PIT SIDE)
CONNECTION POINT
DETAIL 3
SCALE: 3"=1'-0"
STIFFENER PLATE ASSY, 9 PLCS, SEE DETAIL 4
11 GA SH SST, TYP (SOIL SIDE)
STIFFENER
DETAIL 4
SCALE: 6"=1'-0"
3/4" PLATE, TYP
ISOMETRIC VIEW A
SCALE: NONE
HSS 4x4x1/4 END POST
3/4" PLATE, 5'-2" LONG, 2 PLCS
3/4" BOLT HOLES, 9 PLCS TYP ALL CONNECTION POINTS
STIFFENER PLATES, 9 PLCS EQ SP SEE DETAIL 4
ISOMETRIC VIEW B
SCALE: NONE
3/4" BOLT HOLES, 9 PLCS
9 PLCS EQ SP
TYP ALL CONNECTION POINTS
NOTES
1. USE E80 ELECTRODE FOR ALL CARBON STEEL WELDS.
2. FLARE BEVEL WELD ALL HSS CONNECTIONS SHOWN IN DETAILS 1, 2 AND 3, TYP.
X-REF DRAWINGS
519670
519861
INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)
SHORING PLAN, DETAILS AND VIEWS
D 01MF3 098 0671 61 090 DWG-519925
SHEET S-18
SCALE: NOTED
FOR DRAWING INDEX SEE DRAWING NO. 519907
SUBCONTRACT NO. N/A
REQUESTER: S.A. DAVIES
DESIGN: S. JENSEN
DRAWN: B.SEARLE
PROJECT NO. 021052
SEE DAR NO. 90845
DESIGN PHASE: AFC
SAFETY CATEGORY: SS
19



FOR DRAWING INDEX SEE DRAWING NO.	519907
SCALE: 1/4" = 1'-0"	
SCALE: 3" = 1'-0"	
DESIGN PHASE:	AFC
SAFETY CATEGORY:	SS
SUBCONTRACT NO.	N/A
REQUESTER	S.A. DAVIES
DESIGN	S. JENSEN
DRAWN	B.SEARLE
PROJECT NO.	021052
SPEC CODE	
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO.	90845
EFFECTIVE DATE	5/10/02

INEEL

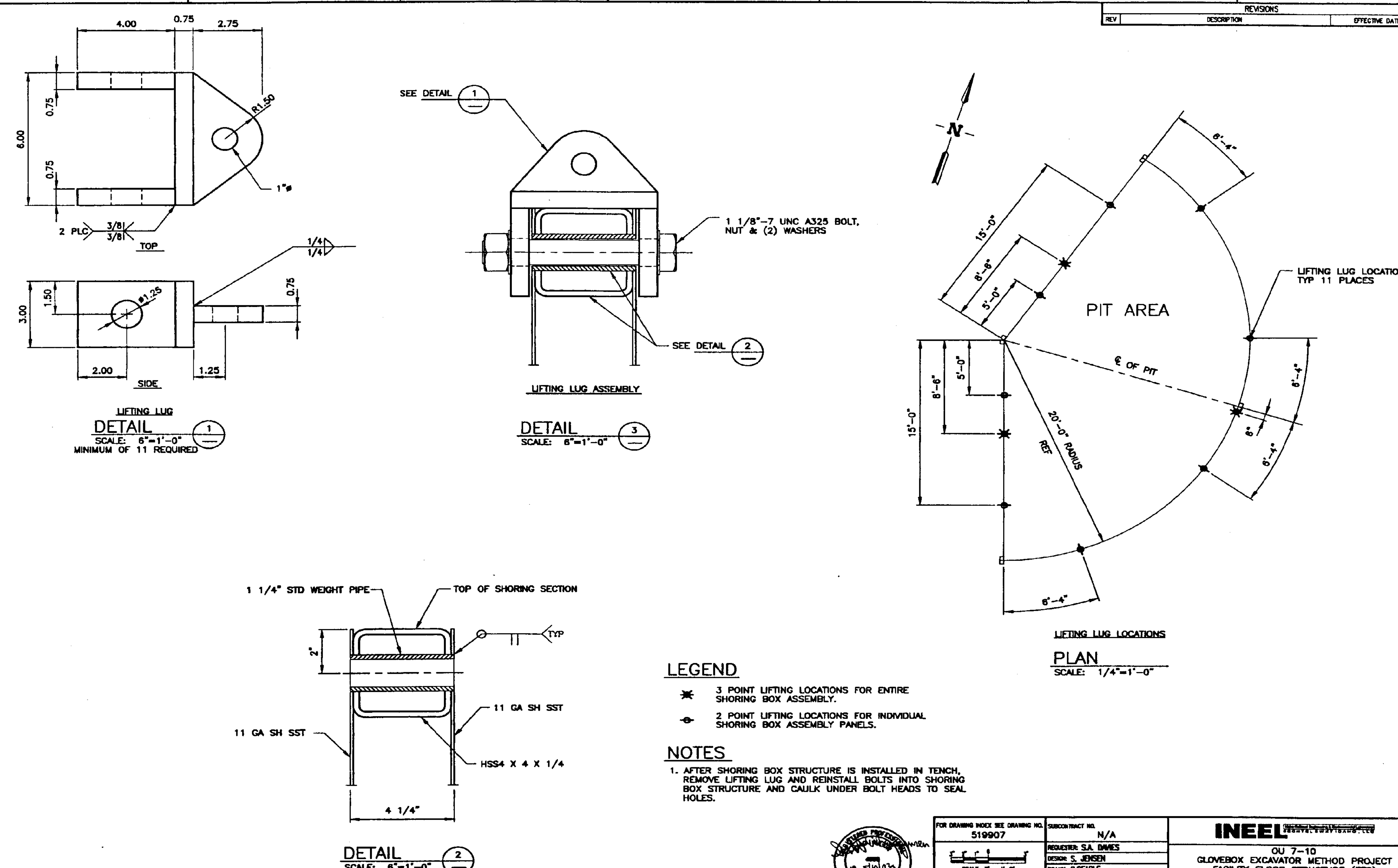
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)

SHORING SECTIONS, DETAILS AND VIEW

SIZE	CAGE CODE	AREA	TYPE	DL	DISC	DWG-	REV
D	01MF3	098	0671	61	090	519926	

SCALE: NOTED — SHEET S-19

File: 519926.dwg Path: V:\AFC_FFS
Layout Name: S-19 Date: 05/10/02 - 12:04 P.M. ID: ABE



LEGEND

- ✱ 3 POINT LIFTING LOCATIONS FOR ENTIRE SHORING BOX ASSEMBLY.
- ⊕ 2 POINT LIFTING LOCATIONS FOR INDIVIDUAL SHORING BOX ASSEMBLY PANELS.

NOTES

1. AFTER SHORING BOX STRUCTURE IS INSTALLED IN TENCH, REMOVE LIFTING LUG AND REINSTALL BOLTS INTO SHORING BOX STRUCTURE AND CAULK UNDER BOLT HEADS TO SEAL HOLES.

REVISIONS

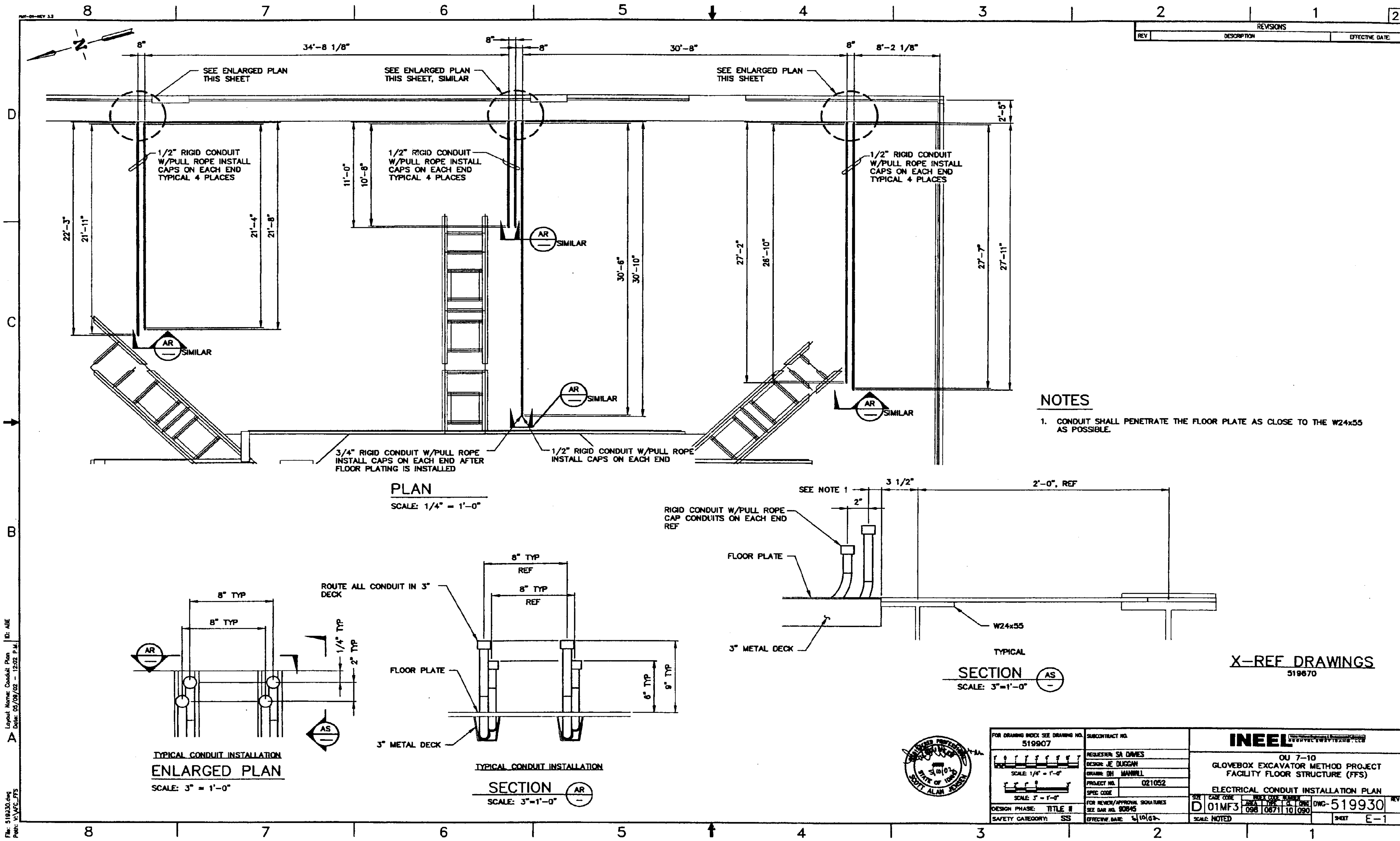
REV	DESCRIPTION	EFFECTIVE DATE:

21

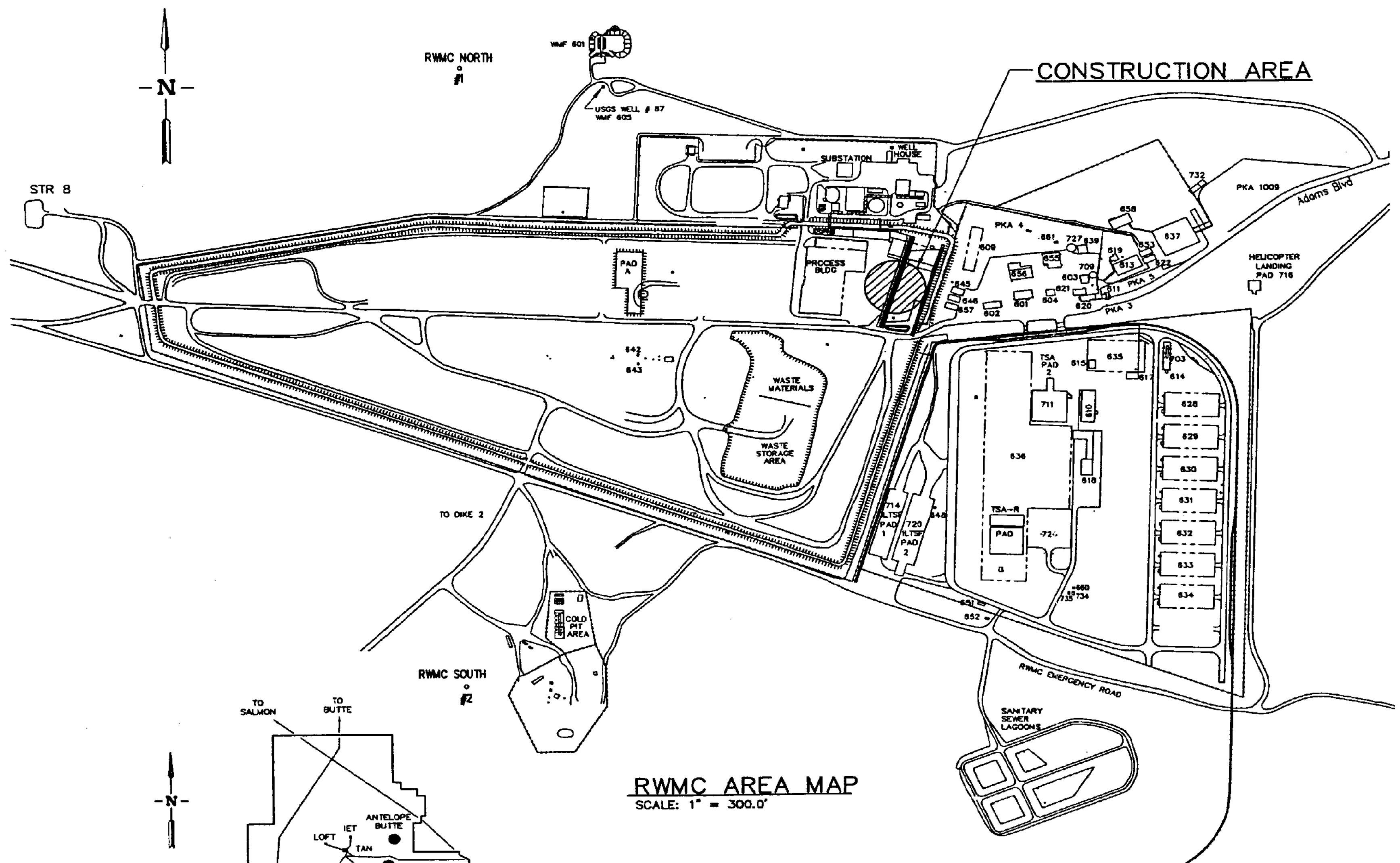
SCOTT ALAN JENSEN — STATE OF IDAHO — REGISTERED PROFESSIONAL ENGINEER — 5/10/02

FOR DRAWING INDEX SEE DRAWING NO. 519907	SUBCONTRACT NO. N/A	INEEL
SCALE: 3" = 1'-0"	REQUESTER: S.A. DAVIES	OU 7-10
SCALE: 1/4" = 1'-0"	DESIGN: S. JENSEN	GLOVEBOX EXCAVATOR METHOD PROJECT
	DRAWN: B.SEARLE	FACILITY FLOOR STRUCTURE (FFS)
	PROJECT NO. 021052	LIFTING LUG PLAN AND DETAILS
DESIGN PHASE: AFC	SPEC CODE	SIZE D; CAGE CODE 01MF3; AREA 098; TYPE 0671; CL 61; ORG 090; DWG-519927; REV
SAFETY CATEGORY: SS	FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90845; EFFECTIVE DATE: 5/10/02	SCALE: NOTED; SHEET S-20

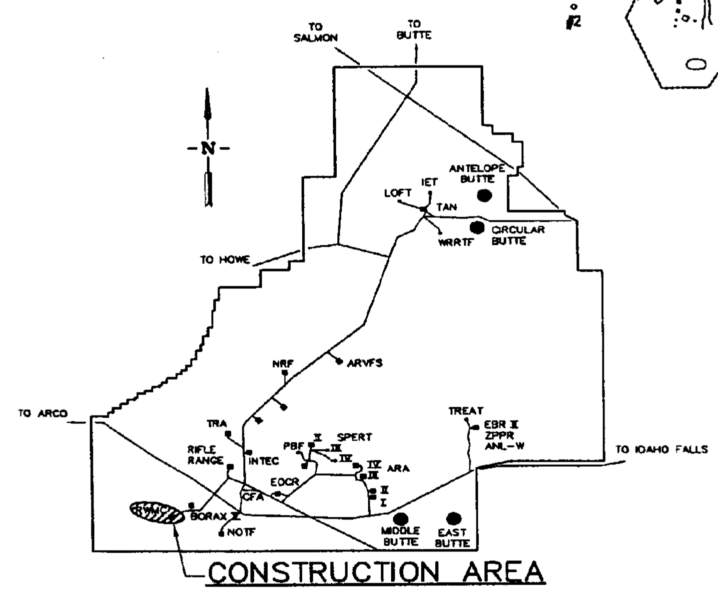
File: 519927.dwg Path: V:\AFC_FFS Layout Name: S-20 Date: 05/06/02 - 1:54 P.M. ID: ABE


22
REVISIONS
REV
DESCRIPTION
EFFECTIVE DATE
N
8"
34'-8 1/8"
30'-8"
8'-2 1/8"
SEE ENLARGED PLAN THIS SHEET
SEE ENLARGED PLAN THIS SHEET, SIMILAR
SEE ENLARGED PLAN THIS SHEET
1/2" RIGID CONDUIT W/PULL ROPE INSTALL CAPS ON EACH END TYPICAL 4 PLACES
22'-3"
21'-11"
21'-4"
21'-8"
11'-0"
10'-8"
30'-6"
30'-10"
27'-2"
26'-10"
27'-7"
27'-11"
2'-5"
AR
SIMILAR
3/4" RIGID CONDUIT W/PULL ROPE INSTALL CAPS ON EACH END AFTER FLOOR PLATING IS INSTALLED
1/2" RIGID CONDUIT W/PULL ROPE INSTALL CAPS ON EACH END
PLAN
SCALE: 1/4" = 1'-0"
NOTES
1. CONDUIT SHALL PENETRATE THE FLOOR PLATE AS CLOSE TO THE W24x55 AS POSSIBLE.
SEE NOTE 1
3 1/2"
2'-0", REF
2"
RIGID CONDUIT W/PULL ROPE CAP CONDUITS ON EACH END REF
FLOOR PLATE
W24x55
3" METAL DECK
TYPICAL
SECTION AS
SCALE: 3"=1'-0"
X-REF DRAWINGS
519670
8" TYP
1/4" TYP
2" TYP
AS
TYPICAL CONDUIT INSTALLATION
ENLARGED PLAN
SCALE: 3" = 1'-0"
ROUTE ALL CONDUIT IN 3" DECK
8" TYP REF
6" TYP
9" TYP
TYPICAL CONDUIT INSTALLATION
SECTION AR
SCALE: 3"=1'-0"
FOR DRAWING INDEX SEE DRAWING NO. 519907
SCALE 1/4" = 1'-0"
SCALE 3" = 1'-0"
DESIGN PHASE: TITLE II
SAFETY CATEGORY: SS
SUBCONTRACT NO.
REQUESTOR SA DAVIES
DESIGN JE DUGGAN
DRAWN DH MANWILL
PROJECT NO. 021052
SPEC CODE
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90845
EFFECTIVE DATE
INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
FACILITY FLOOR STRUCTURE (FFS)
ELECTRICAL CONDUIT INSTALLATION PLAN
SIZE D
CAGE CODE 01MF3
INDEX CODE NUMBER AREA 098 TYPE 0671 CL 10 DWG 090
DWG-519930
REV
SCALE NOTED
SHEET E-1
STATE OF IDAHO
SCOTT ALAN JENSEN
File: 519930.dwg
Path: V:\AFC_FFS
Layout Name: Conduit Plan
Date: 05/08/02 - 12:02 P.M.
ID: ABE

REV	DESCRIPTION	EFFECTIVE DATE:
1	GENERAL REVISIONS SEE DAR #90906	4-16-2002



RWMC AREA MAP
SCALE: 1" = 300.0'



SITE MAP
SCALE: NONE

DRAWING INDEX

PAGE NO.	DWG NO.	A-E SH NO.	REV	DRAWING TITLE
TITLE SHEET				
1	519888	T-1	1	SITE MAP, AREA MAP AND DRAWING INDEX
ARCHITECTURAL				
2	519889	A-1	1	FLOOR PLAN AND LEGENDS
3	519890	A-2	1	ELEVATIONS
4	519891	A-3		VIEWS
5	519892	A-4	1	VIEWS
6	519893	A-5		VIEWS
7	519894	A-6		ROOF PLAN, DETAILS AND LEGEND
8	519895	A-7		GLOVE BOX CONNECTION SECTION AND DETAILS
X-REFERENCE DRAWINGS				
	519671		1	RCS STRUCTURE

INFORMATION ONLY

RELEASED
FOR RECORD ONLY
DO NOT FABRICATE

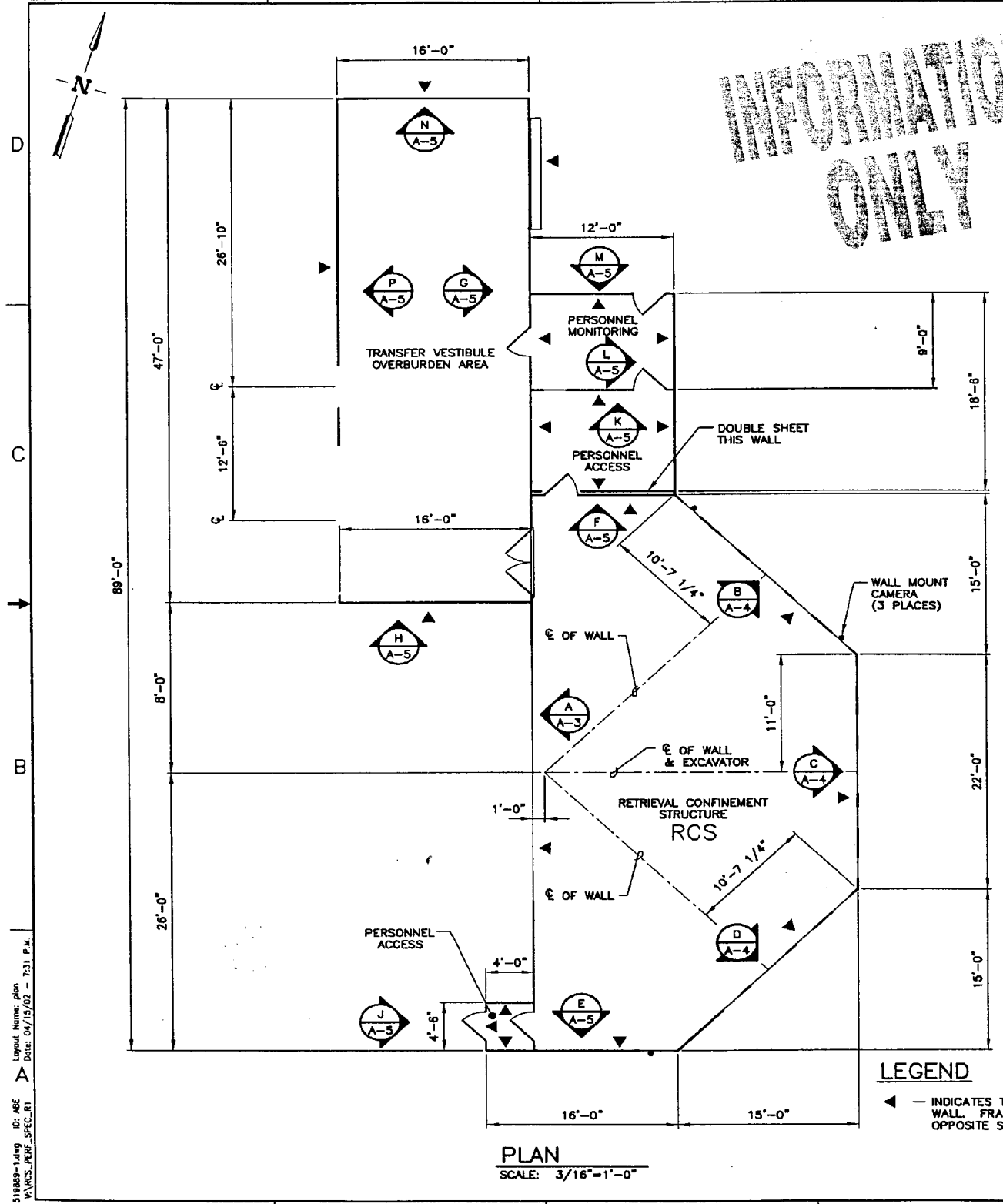
REVISION: 1
ORIGINAL SIGNED BY: SCOTT ALAN JENSEN
DATE ORIGINAL SIGNED: 4/16/02
SEAL NUMBER: 4003
ORIGINAL STORED AT: EROB DOCUMENT CONTROL

REGISTERED PROFESSIONAL ENGINEER — STATE OF IDAHO — SCOTT ALAN JENSEN

FOR DRAWING INDEX SEE DRAWING NO. 519888	SUBCONTRACT NO. N/A	INEEL
SCALE: 1" = 300.0'	REQUESTER: SA DAVIES	OU 7-10 GLOVEBOX EXCAVATOR METHOD PROJECT RETRIEVAL CONFINEMENT STRUCTURE
	DESIGN: S. JENSEN	SITE MAP, AREA MAP AND DRAWING INDEX
	DRAWN: B.SEARLE	SIZE D; CAGE CODE 1MF3; INDEX CODE NUMBER AREA 098, TYPE 0100, CL 01, DWG 090; DWG- 519888; REV 1
	PROJECT NO. 021052	SCALE: NOTED; SHEET T-1
	SPEC CODE: REC REL	
DESIGN PHASE: PERF SPEC	FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90072	
SAFETY CATEGORY: SS	EFFECTIVE DATE: 4/9/02	

File: 519888-1.dwg ID: ABE Layout Name: Layout1
Path: V:\RCS_PERF_SPEC_R1 Date: 04/15/02 - 7:36 P.M.

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE:
1	GENERAL REVISION SEE DAR #90908	4-16-2002



PLAN
SCALE: 3/16"=1'-0"

OPENING LEGEND

TYPE	NOMINAL SIZE	QUANTITY	TYPE OF OPENING	GLAZING	POSITIONAL TOLERANCES	REMARKS
A	8'-0" X 4'-0"	5	WINDOW OPENING	LEXAN	HORIZ: ±3", VERT: +6	OBSERVATION
B	30" DIAMETER	1	FRAMED OPENING	NONE	HORIZ: ±6", VERT: ±6"	AIR INLET – 1 1/2" MIN. FLANGE REQ'D
C	12" DIAMETER	4	FRAMED OPENING	NONE	HORIZ: ±6", VERT: ±6"	AIR INLET
D	2'-0" X 2'-0"	2	FRAMED OPENING	NONE	HORIZ: ±6", VERT: -6"	AIR INLET
E	4'-2 3/4" X 4'-2 3/4"	3	FRAMED OPENING	NONE	HORIZ: ±1", VERT: ±1"	OPENING FOR GLOVE BOX
F	2'-0" X 2'-0"	11	WINDOW OPENING	LEXAN	HORIZ: ±2", VERT: ±2"	OBSERVATION
G	2'-0" X 2'-0"	3	WINDOW OPENING	LEXAN	HORIZ: ±2", VERT: ±2"	CAMERA
H	1'-6" X 7'-6"	1	FRAMED OPENING	NONE	HORIZ: +3", VERT: ±3"	HEPA INLET – 1 1/2" MIN. FLANGE REQ'D
J	8'-0" X 4'-7"	1	FRAMED OPENING	NONE	HORIZ: ±1", VERT: ±1"	OPENING FOR EXCAVATOR
K	8" DIAMETER	1	SEE NOTE 3	NONE	HORIZ: ±6", VERT: -3"	OPENING FOR GROUT AT LATER PHASE
L	4" DIAMETER	2	SEE NOTE 3	NONE	HORIZ: ±6", VERT: -3"	OPENING FOR AIR SAMPLING PORT
M	14" X 14"	1	FRAMED OPENING	NONE	HORIZ: ±6", VERT: ±6"	OPENING FOR FAN
N	2" X 3"	1	SEE NOTE 3	NONE	HORIZ: ±6", VERT: -6"	OPENING FOR BREATHING AIR
P	4" DIAMETER	1	SEE NOTE 3	NONE	HORIZ: ±6"	OPENING AT ROOF

DOOR OPENING LEGEND

TYPE	NOMINAL SIZE	QUANTITY	NOMINAL SIZE OF GLAZING	TYPE OF GLAZING	TYPE OF OPENING	REMARKS
1	3'-0" X 7'-0"	6	2'-0" X 2'-0"	LEXAN	DOOR OPENING	
2	6'-0" X 7'-0"	1	2'-0" X 2'-0"	LEXAN	DOOR OPENING	GLAZING IN EACH DOOR
3	10'-0" X 10'-0"	1	———	———	COILING DOOR OPENING	
4	4'-0" X 8'-0"	1	———	———	DOOR OPENING	NO DOOR REQUIRED – FRAMED OPENING ONLY
5	14'-0" X 12'-0"	1	———	———	DOOR OPENING	NO DOOR REQUIRED – FRAMED OPENING ONLY

NOTES

1. PLAN DIMENSIONS ARE FROM INSIDE OF WALL TO INSIDE OF WALL (NOMINAL) OR FROM INSIDE OF WALL TO CENTER LINE (NOMINAL).
2. SEE SHEETS A-3, A-4 & A-5 FOR WALL DIMENSIONS.
3. PENETRATION TO BE FIELD CUT BY OTHERS.
4. RETRIEVAL CONFINEMENT STRUCTURE BEARS ON 1/2" MINIMUM CARBON STEEL PLATE SUPPORTED BY CARBON STEEL WIDE FLANGE BEAMS.

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DO NOT FABRICATE

X-REF DRAWING
519671-1

LEGEND

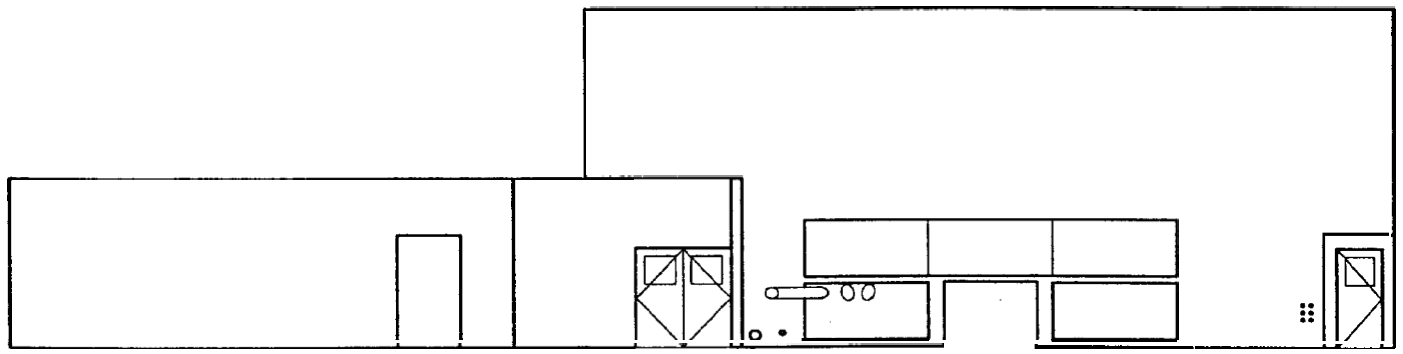
◄ — INDICATES THE SMOOTH SIDE OF PANEL WALL. FRAMING MEMBERS FOR WALL ON OPPOSITE SIDE OF INDICATOR.

REVISION: 1
ORIGINAL SIGNED BY: SCOTT ALAN JENSEN
DATE ORIGINAL SIGNED: 4/16/02
SEAL NUMBER: 4003
ORIGINAL STORED AT: EROS DOCUMENT CONTROL

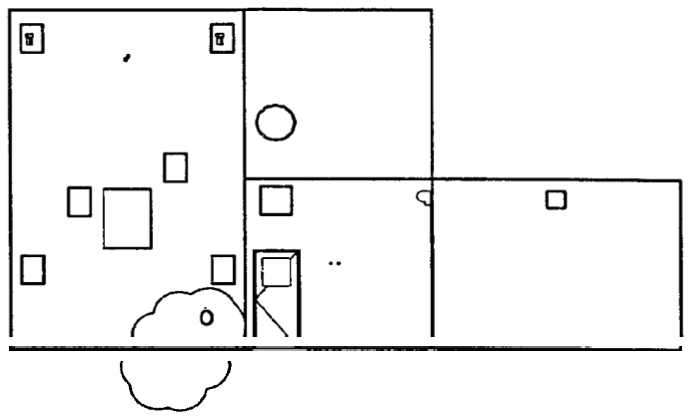
REGISTERED PROFESSIONAL ENGINEER 4003 STATE OF IDAHO SCOTT ALAN JENSEN

FOR DRAWING INDEX SEE DRAWING NO. 519888	SUBCONTRACT NO. N/A	INEEL
SCALE: 3/16" = 1'-0"	REQUESTER: S.A. DAVIES	OU 7-10 GLOVEBOX EXCAVATOR METHOD PROJECT RETRIEVAL CONFINEMENT STRUCTURE
	DESIGN: S. JENSEN	FLOOR PLAN AND LEGENDS
	DRAWN: B.SEARLE	
	PROJECT NO. 021052	
	SPEC CODE REC REL	
DESIGN PHASE: PERF SPEC	FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90072	SIZE D | CADD CODE 01MF3 | WORK ORDER NUMBER AREA 098 | TYPE 0671 | CL 00 | DRWG 090 | DWG-519889 | REV 1
SAFETY CATEGORY: SS	EFFECTIVE DATE: 4/9/02	SCALE: NOTED | SHEET A-1

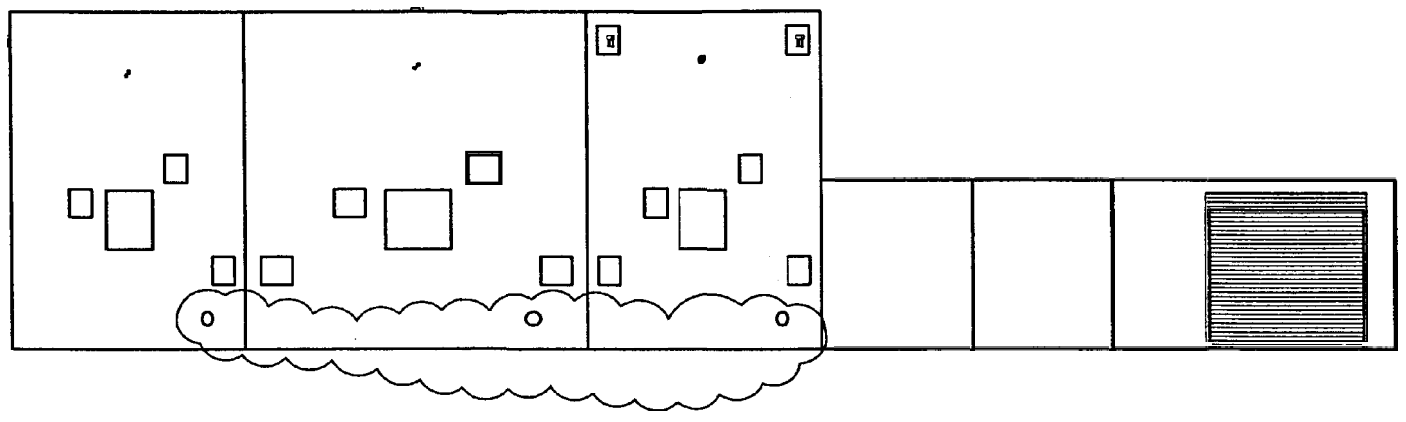
REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE:
1	GENERAL REVISION SEE DAR #90906	4-16-2002



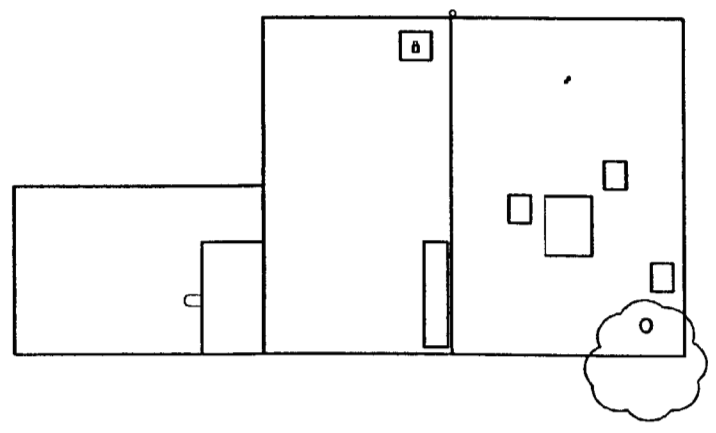
WEST ELEVATION



NORTH ELEVATION



EAST ELEVATION



SOUTH EL ON

INFORMATION ONLY

RELEASED FOR RECORD ONLY

DO NOT FABRICATE

X-REF DRAWING

519671-1

NOTES

1. SEE VIEWS ON SHEETS A-3, A-4 AND A-5 FOR DIMENSIONS.

REVISION: 1
ORIGINAL SIGNED BY: SCOTT ALAN JENSEN
DATE ORIGINAL SIGNED: 4/16/02
SEAL NUMBER: 4003
ORIGINAL STORED AT: EROB DOCUMENT CONTROL

REGISTERED PROFESSIONAL ENGINEER 4003 STATE OF IDAHO SCOTT ALAN JENSEN

FOR DRAWING INDEX SEE DRAWING NO. 519888	SUBCONTRACT NO. N/A
SCALE: 3/16" = 1'-0"	REQUESTER: S.A. DAVIES
	DESIGN: S. JENSEN
	DRAWN: B.SEARLE
	PROJECT NO. 021052
	SPEC CODE REC REL
DESIGN PHASE: PERF SPEC	FOR REVIEW/APPROVAL SIGNATURES SEE DWG NO. 90072
SAFETY CATEGORY: SS	EFFECTIVE DATE: 4/9/02

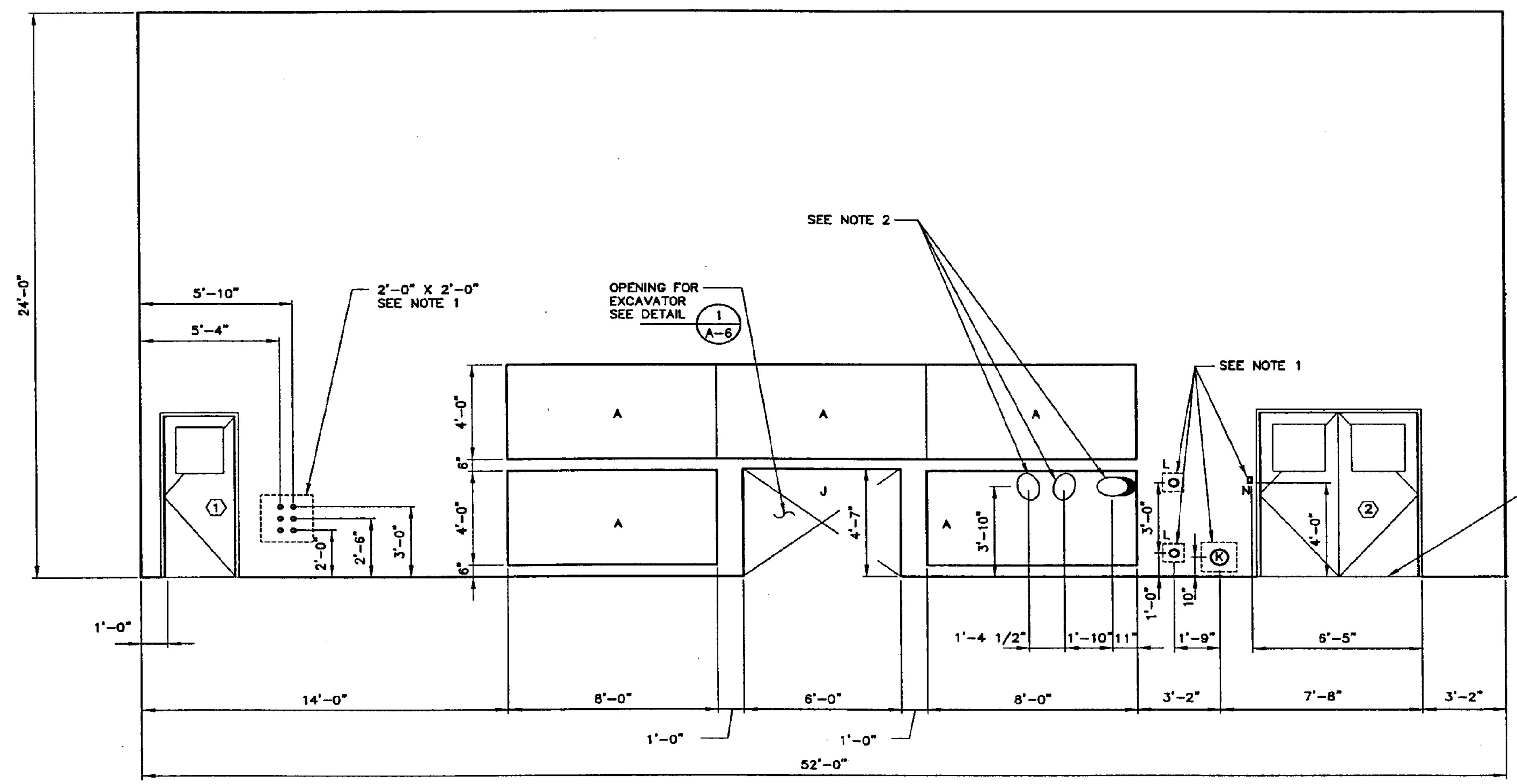
INEEL

OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
RETRIEVAL CONFINEMENT STRUCTURE

ELEVATIONS

SIZE	CADE CODE	ROCK CASK NUMBER				DWG-	REV
		AREA	TYPE	SI	SEQ		
D	01MF3	098	0671	00	090	519890	1

SCALE: NOTED SHEET A-2



VIEW A A-1
SCALE: 3/8"=1'-0"

NOTES

1. REINFORCE THIS AREA FOR PENETRATIONS, (MIN. 16 GA PANEL MATERIAL), SEE SPECIFICATION FOR EXACT PENETRATION SIZES. PROVIDE ADEQUATE FRAMING SUPPORT. PENETRATIONS TO BE FIELD CUT BY OTHERS.
2. ANTICIPATED LOCATIONS FOR GLOVE PORTS (QUANTITY : 2) AND BAG OUT OPENING (QUANTITY : 1). OPENING TO BE CUT IN FIELD BY OTHERS.
3. DIMENSIONS ARE FROM INSIDE OF CLEAR OPENING TO INSIDE OF WALL (NOMINAL), OR FROM CENTERLINE TO FINISH FLOOR LEVEL (NOMINAL), OR FROM INSIDE OF CLEAR OPENING TO FINISH FLOOR LEVEL (NOMINAL).

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REVISION: 0
ORIGINAL SIGNED BY: SCOTT ALAN JENSEN
DATE ORIGINAL SIGNED: 4/9/02
SEAL NUMBER: 4003
ORIGINAL STORED AT: EROB DOCUMENT CONTROL

REGISTERED PROFESSIONAL ENGINEER 4003 STATE OF IDAHO SCOTT ALAN JENSEN

INFORMATION ONLY

X-REF DRAWING
519871.dwg

FOR DRAWING INDEX SEE DRAWING NO.	519888
SCALE: 3/8" = 1'-0"	
DESIGN PHASE:	PERF SPEC
SAFETY CATEGORY:	SS
SUBCONTRACT NO.	N/A
REQUESTER:	S.A. DAVIES
DESIGN:	S. JENSEN
DRAWN:	B.SEARLE
PROJECT NO.	021052
SPEC CODE	REC REL
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO.	90072
EFFECTIVE DATE:	4/9/02

INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
RETRIEVAL CONFINEMENT STRUCTURE
VIEWS

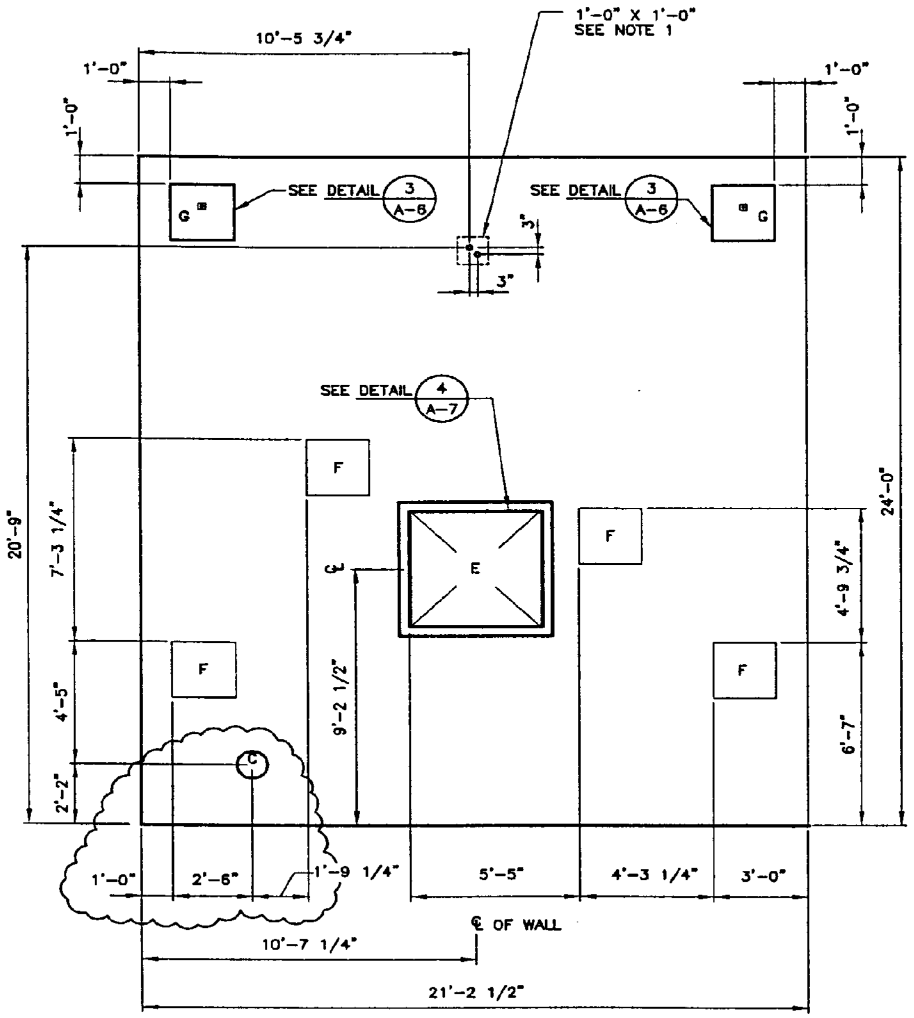
SIZE	CAGE CODE	AREA	TYPE	D	DISC	DWG-	REV
D	01MF3	098	0671	00	090	519891	
SCALE: NOTED						SHEET A-3	

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE:

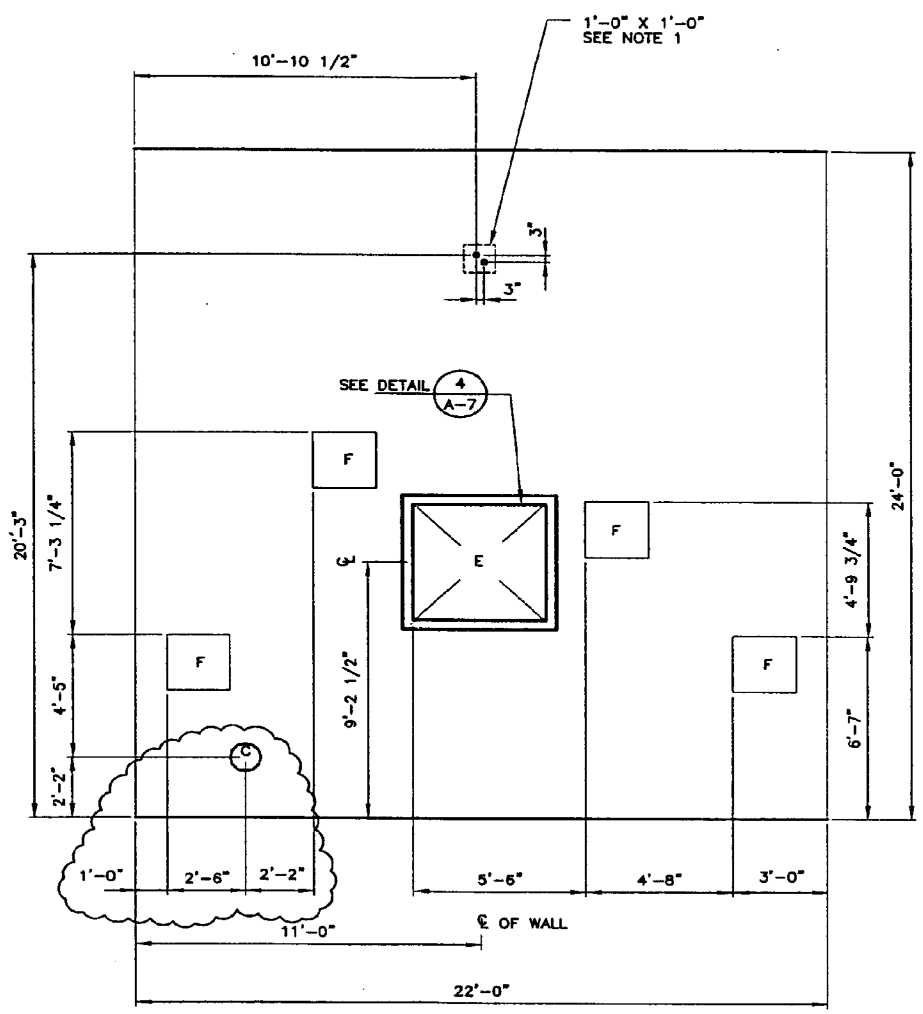
4

File: 519891.dwg Path: Y:\struct ID: JEA Layout Name: A-3 Date: 04/09/02 - 11:27 A.M.

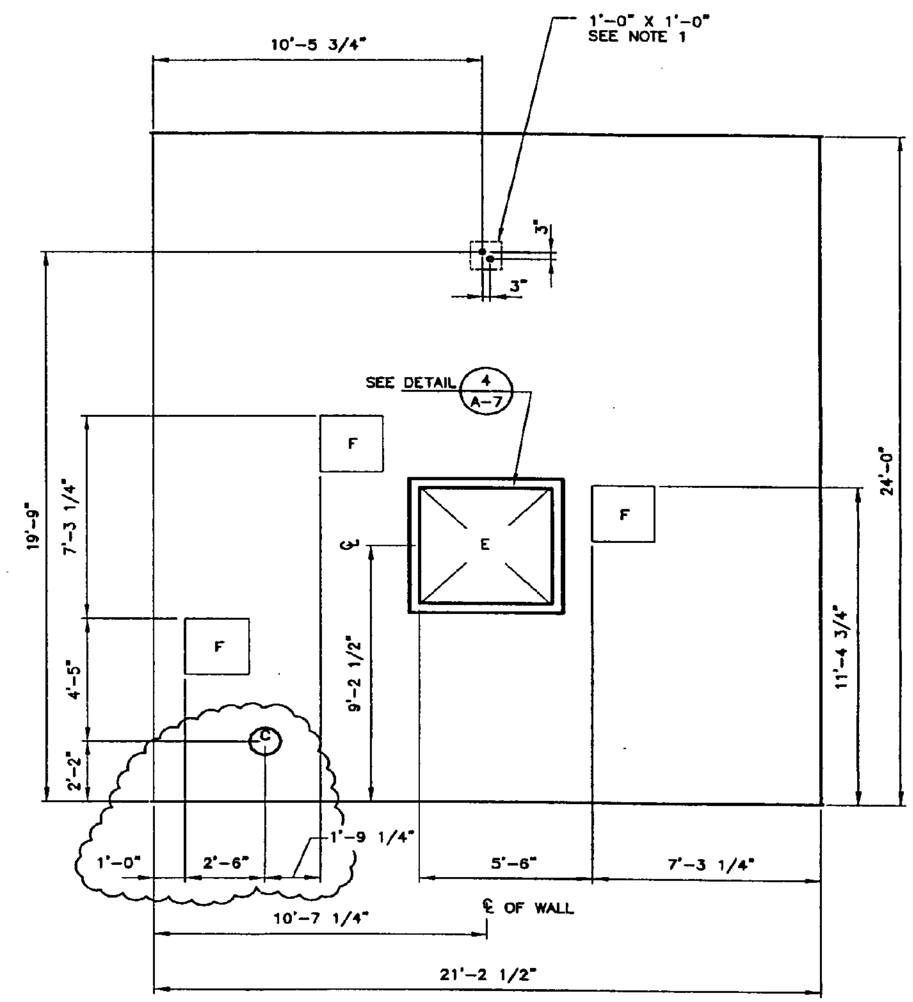
REV	DESCRIPTION	EFFECTIVE DATE:
1	GENERAL REVISION SEE DAR #90906	4-16-2002



VIEW B/A-1
SCALE: 3/8"=1'-0"



VIEW C/A-1
SCALE: 3/8"=1'-0"



VIEW D/A-1
SCALE: 3/8"=1'-0"

X-REF DRAWING
519671-1

INFORMATION ONLY

NOTES

1. REINFORCE THIS AREA FOR PENETRATIONS, (MIN. 16 GA PANEL MATERIAL). SEE SPECIFICATION FOR EXACT PENETRATION SIZES. PROVIDE ADEQUATE FRAMING SUPPORT. PENETRATIONS TO BE FIELD CUT BY OTHERS.
2. DIMENSIONS ARE FROM INSIDE OF CLEAR OPENING TO INSIDE OF WALL (NOMINAL), OR FROM CENTERLINE TO FINISH FLOOR LEVEL (NOMINAL), OR FROM INSIDE OF CLEAR OPENING TO FINISH FLOOR LEVEL (NOMINAL).

REVISION: 1
ORIGINAL SIGNED BY: SCOTT ALAN JENSEN
DATE ORIGINAL SIGNED: 4/16/02
SEAL NUMBER: 4003
ORIGINAL STORED AT: EROB DOCUMENT CONTROL

REGISTERED PROFESSIONAL ENGINEER 4003 STATE OF IDAHO SCOTT ALAN JENSEN

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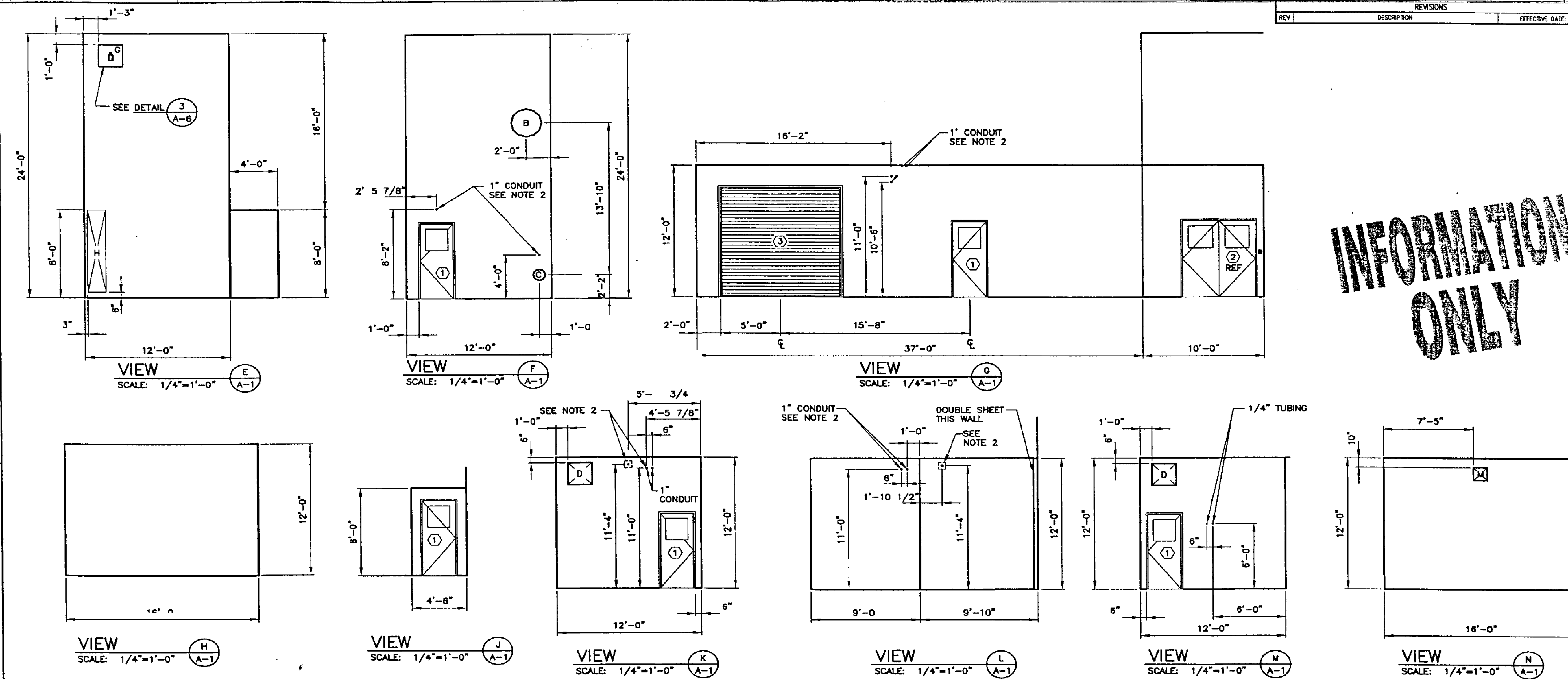
FOR DRAWING INDEX SEE DRAWING NO. 519888
SCALE: 3/8" = 1'-0"
SUBCONTRACT NO. N/A
REQUESTER: S.A. DAVIES
DESIGN: S. JENSEN
DRAWN: B.SEARLE
PROJECT NO. 021052
SPEC CODE: REC REL
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90072
EFFECTIVE DATE: 4/9/02
DESIGN PHASE: PERF SPEC
SAFETY CATEGORY: SS

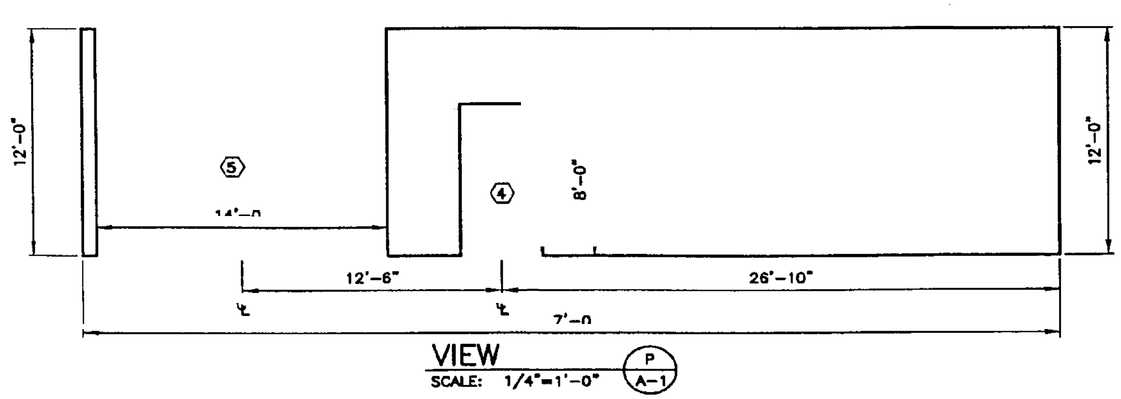
INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
RETRIEVAL CONFINEMENT STRUCTURE
VIEWS

SIZE	CAGE CODE	AREA	TYPE	CL	DISC	DWG-	REV
D	01MF3	098	0671	00	090	519892	1

SCALE: NOTED
SHEET A-4

File: 519892-1.dwg ID: ABE Layout Name: A-4
Path: V:\RCS_PERF_SPEC_R1 Date: 04/15/02 - 7:27 P.M.





NOTES

1. DIMENSIONS ARE FROM INSIDE OF CLEAR OPENING TO INSIDE OF WALL (NOMINAL), OR FROM CENTERLINE TO FINISH FLOOR LEVEL (NOMINAL), OR FROM INSIDE OF CLEAR OPENING TO FINISH FLOOR LEVEL (NOMINAL).
2. REINFORCE THIS AREA FOR PENETRATIONS, (MIN. 16 GA PANEL MATERIAL). SEE SPECIFICATION FOR EXACT PENETRATION SIZES. PROVIDE ADEQUATE FRAMING SUPPORT. PENETRATIONS TO BE FIELD CUT BY OTHERS.

X-REF DRAWING
519671.dwg

REVISION: 0
ORIGINAL SIGNED BY: SCOTT ALAN JENSEN
DATE ORIGINAL SIGNED: 4/9/02
SEAL NUMBER: 4003
ORIGINAL STORED AT: EROB DOCUMENT CONTROL

REGISTERED PROFESSIONAL ENGINEER 4003 STATE OF IDAHO SCOTT ALAN JENSEN

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FOR DRAWING INDEX SEE DRAWING NO. 519888	SUBCONTRACT NO. N/A
SCALE: 1/4" = 1'-0"	REQUESTER: S.A. DAVIES
	DESIGN: S. JENSEN
	DRAWN: B.SEARLE
	PROJECT NO. 021052
	SPEC CODE: REC REL
DESIGN PHASE: PERF SPEC	FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90072
SAFETY CATEGORY: SS	EFFECTIVE DATE: 4/9/02

INEEL

OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
RETRIEVAL CONFINEMENT STRUCTURE
VIEWS

SIZE	CAGE CODE	AREA	TYPE	DL	ORG	DWG-	REV
D	01MF3	098	0671	00	090	519893	

SCALE: NOTED | SHEET A-5

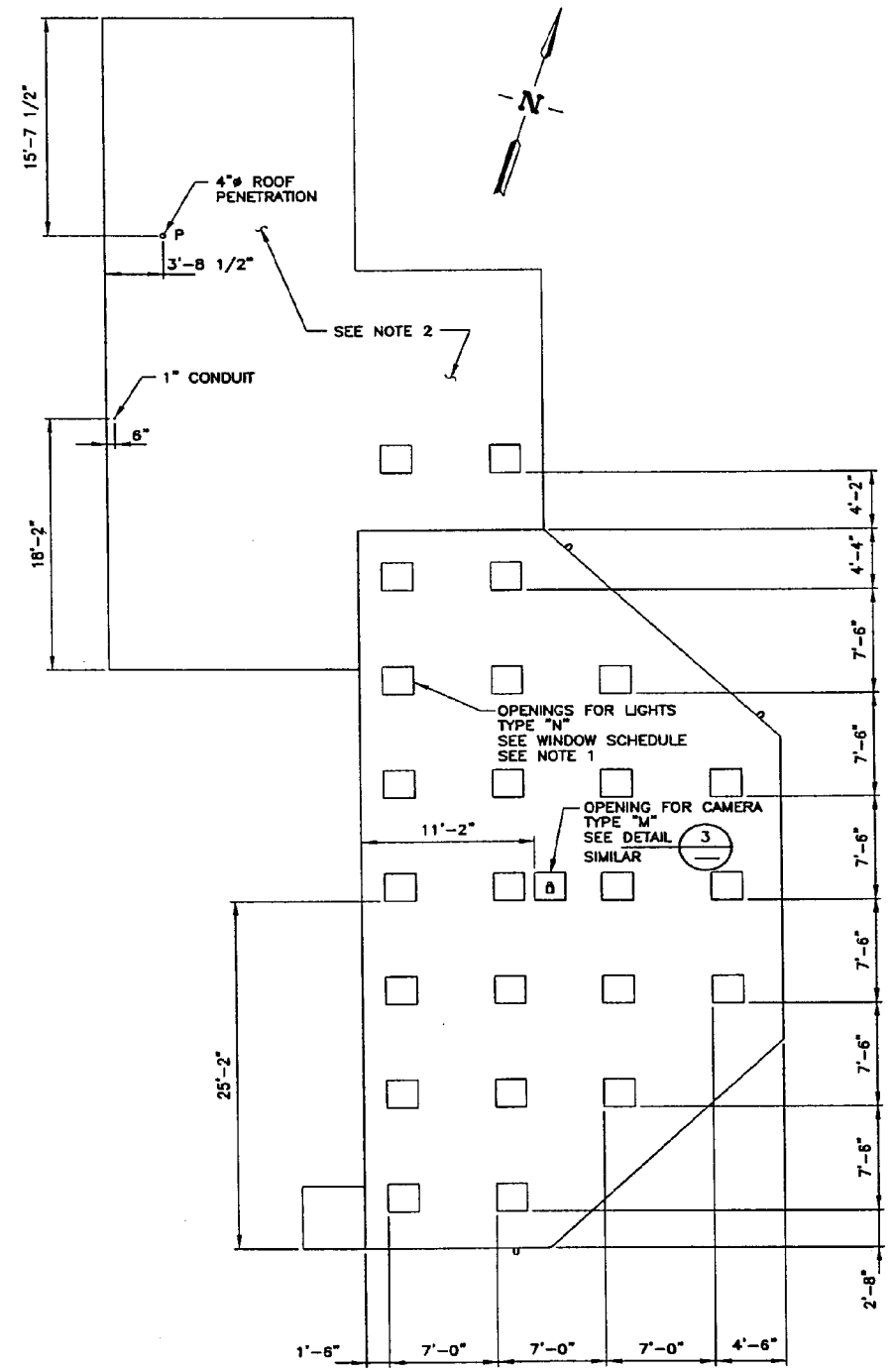
REV	DESCRIPTION	EFFECTIVE DATE:

REVISIONS

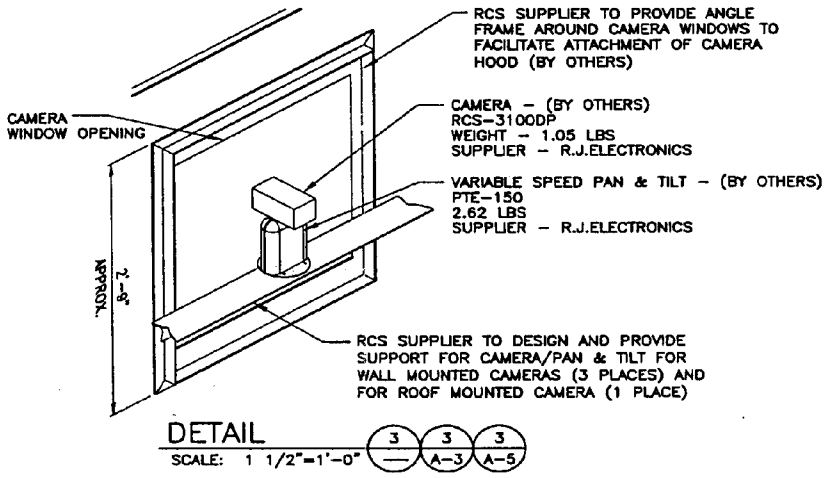
6

File: 519893.dwg Path: Y:\struct ID: SEA Layout Name: A-5 Date: 04/09/02 - 11:27 A.M.

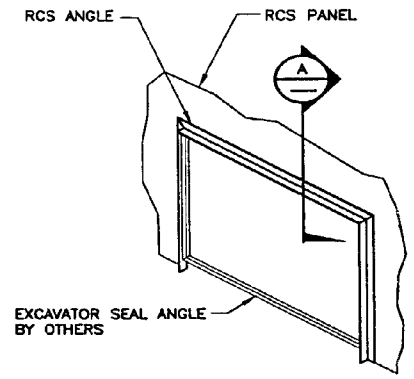
REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE



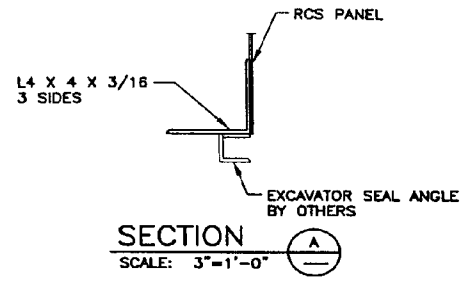
ROOF PLAN
SCALE: 3/16"=1'-0"



DETAIL
SCALE: 1 1/2"=1'-0"



DETAIL
SCALE: NONE



SECTION
SCALE: 3"=1'-0"

INFORMATION ONLY

ROOF WINDOW LEGEND

TYPE	NOMINAL SIZE	QUANTITY	TYPE OF OPENING	GLAZING	POSITIONAL TOLERANCES	REMARKS
M	2'-0" X 2'-0"	1	WINDOW OPENING	LEXAN	HORIZ: ±6"	CAMERA
N	2'-0" X 2'-0"	24	WINDOW OPENING	LEXAN	HORIZ: ±6"	LIGHTS

NOTES

1. RCS SUPPLIER TO DESIGN AND PROVIDE BRACKET FOR LUMARK LIGHT FIXTURES. APPROXIMATELY 2" MIN. AND 4" MAX. REQUIRED BETWEEN BULB AND LEXAN SURFACES WEIGHT: APPROX. 60 LBS. PER FIXTURE. SEE APPENDIX E OF SPECIFICATION FOR ADDITIONAL INFORMATION.
2. RCS SUPPLIER TO PROVIDE ADEQUATE SUPPORT FOR METALUX (VT2-232 DR-WL) LIGHT FIXTURE ON THE INSIDE CEILING SURFACE OF THESE AREAS. SEE APPENDIX E OF SPECIFICATION FOR ADDITIONAL INFORMATION.
3. DIMENSIONS SHOWN FOR ROOF PLAN OPENINGS ARE NOMINAL.

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X-REF DRAWING
519671.dwg

REVISION: 0
ORIGINAL SIGNED BY: SCOTT ALAN JENSEN
DATE ORIGINAL SIGNED: 4/9/02
SEAL NUMBER: 4003
ORIGINAL STORED AT: EROB DOCUMENT CONTROL

REGISTERED PROFESSIONAL ENGINEER 4003 STATE OF IDAHO SCOTT ALAN JENSEN

FOR DRAWING INDEX SEE DRAWING NO. 519888
SCALE: 3/16" = 1'-0"
SCALE: 3" = 1'-0"
DESIGN PHASE: PERF SPEC
SAFETY CATEGORY: SS

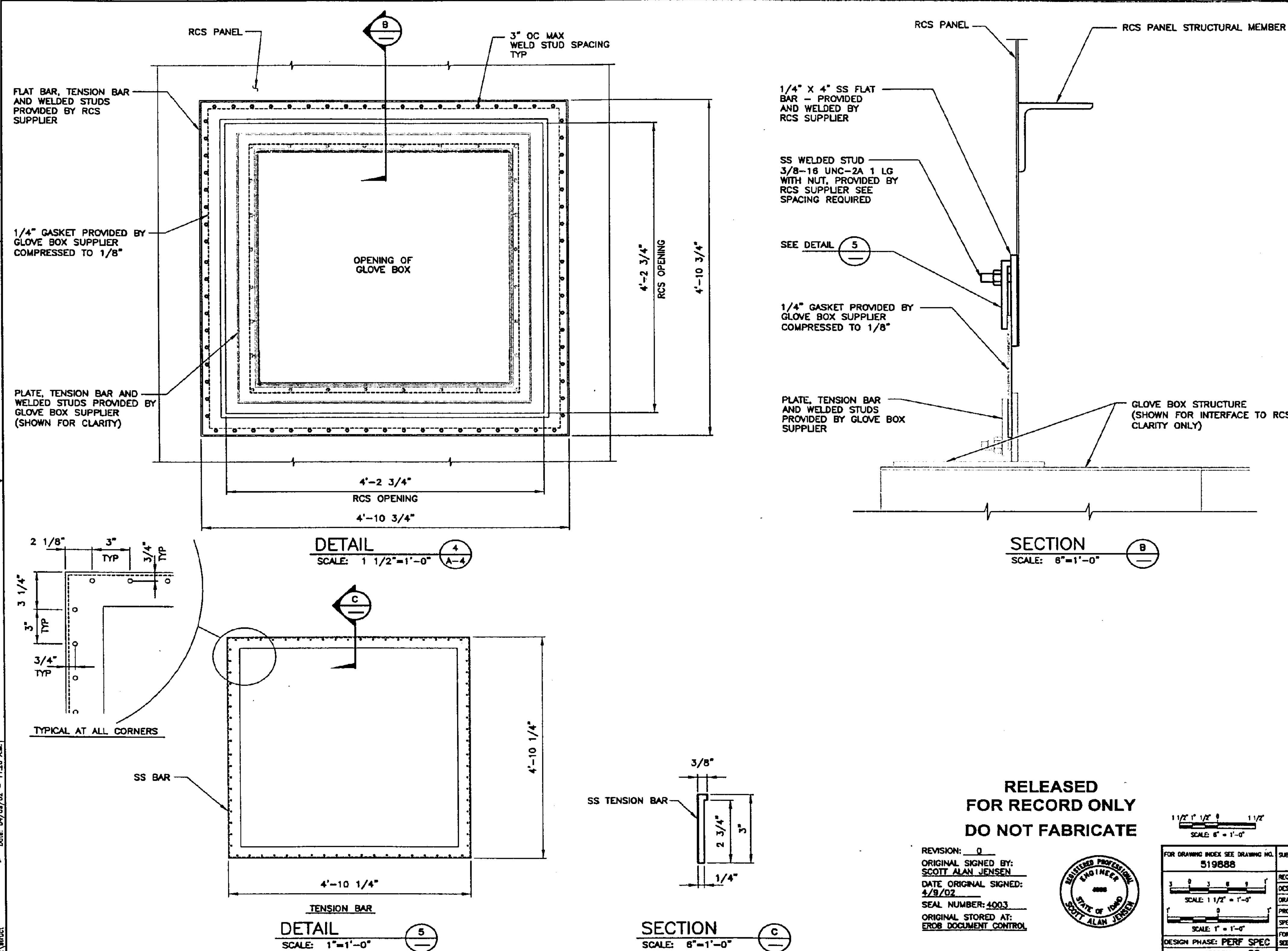
SUBCONTRACT NO. N/A
REQUESTER: S.A. DAVIES
DESIGN: S. JENSEN
DRAWN: B.SEARLE
PROJECT NO. 021052
SPEC CODE REC REL
FOR REVIEW/APPROVAL SIGNATURES
SEE DAR NO. 90072
EFFECTIVE DATE: 4/9/02

INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
RETRIEVAL CONFINEMENT STRUCTURE
ROOF PLAN, DETAILS AND LEGEND

SIZE	CAGE CODE	DWG CODE NUMBER				REV
		AREA	TYPE	SQ	DISC	
D	01MF3	098	0671	00	090	

DWG- 519894
SCALE: NOTED
SHEET A-6

File: 519894.dwg
Path: Y:\struct
ID: SEA
Layout Name: ROOF
Date: 04/09/02 - 11:27 A.M.



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FOR RECORD ONLY
DO NOT FABRICATE

REVISION: 0
ORIGINAL SIGNED BY: SCOTT ALAN JENSEN
DATE ORIGINAL SIGNED: 4/9/02
SEAL NUMBER: 4003
ORIGINAL STORED AT: EROB DOCUMENT CONTROL

REGISTERED PROFESSIONAL ENGINEER 4003 STATE OF IDAHO SCOTT ALAN JENSEN

INFORMATION ONLY

REVISIONS	
REV	DESCRIPTION	EFFECTIVE DATE:

FOR DRAWING INDEX SEE DRAWING NO. 519888	SUBCONTRACT NO. N/A
SCALE: 6" = 1'-0"; SCALE: 1 1/2" = 1'-0"; SCALE: 1" = 1'-0"	REQUESTER: S.A. DAVIES
	DESIGN: S. JENSEN
	DRAWN: B.SEARLE
	PROJECT NO. 021052
	SPEC CODE REC REL
DESIGN PHASE: PERF SPEC	FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90072
SAFETY CATEGORY: SS	EFFECTIVE DATE: 4/9/02

INEEL

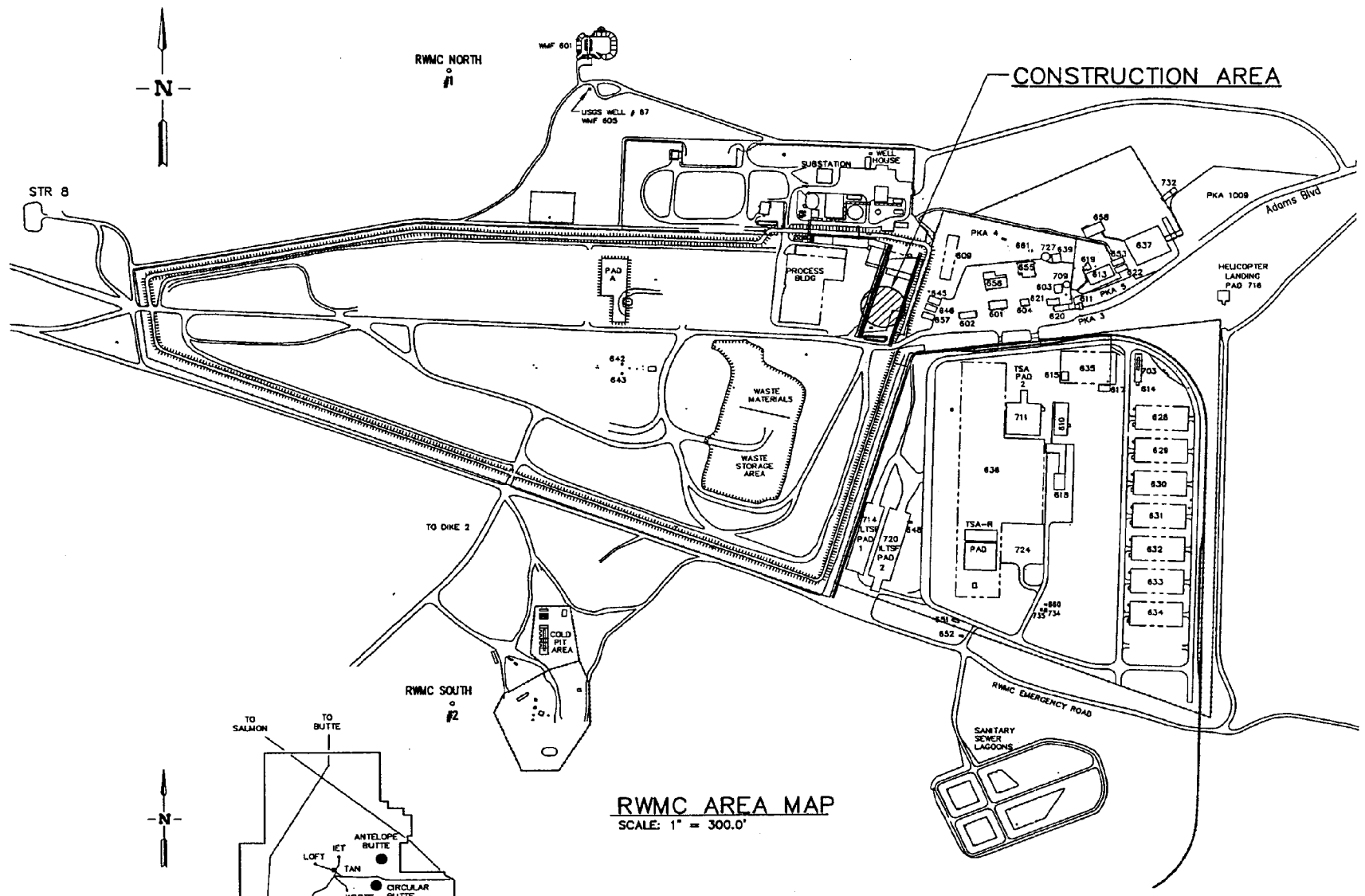
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
RETRIEVAL CONFINEMENT STRUCTURE

GLOVE BOX CONNECTION SECTION AND DETAILS

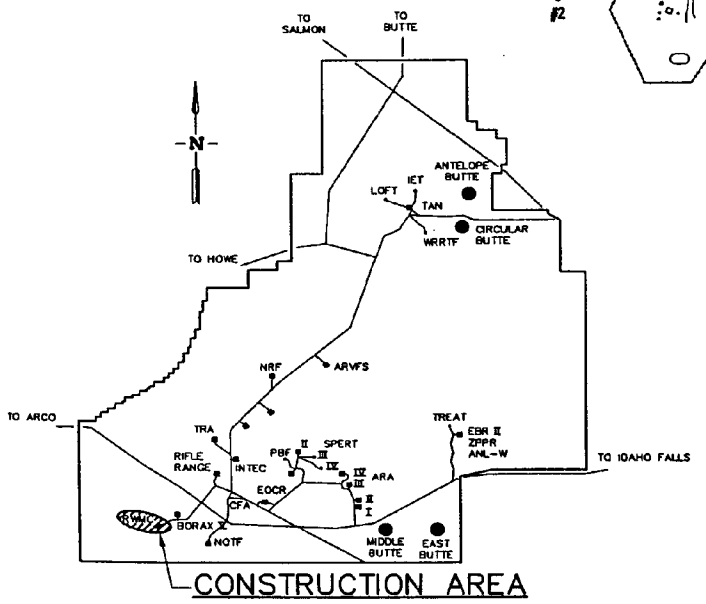
SIZE	CAGE CODE	AREA	TYPE	DL	ORIG	DWG-	REV
D	01MF3	098	0671	60	090	519895	

SCALE: NOTED — SHEET A-7

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE:



RWMC AREA MAP
SCALE: 1" = 300.0'



CONSTRUCTION AREA

SITE MAP
SCALE: NONE

DRAWING INDEX

PAGE NO.	DWG NO.	A-E SH NO.	REV	DRAWING TITLE
TITLE SHEET				
1	519896	T-1		SITE MAP, AREA MAP AND DRAWING INDEX
ARCHITECTURAL				
2	519897	A-1		FLOOR PLAN
3	519898	A-2		ELEVATIONS
4	519899	A-3		ELEVATIONS
5	519900	A-4		SECTIONS
6	519901	A-5		DETAILS AND SECTION

X-REFERENCE DRAWINGS

519670	FFS XREF
519671-2	RCS STRUCTURE
519677	WES STRUCTURE
519861	SHORING BOX

INFORMATION ONLY

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FOR DRAWING INDEX SEE DRAWING NO.	519896
SCALE: 1" = 300.0'	
DESIGN PHASE:	PERF SPEC
SAFETY CATEGORY:	LSC
SUBCONTRACT NO.	N/A
REQUESTER:	SA DAVIES
DESIGN:	DN NISHIOKA
DRAWN:	B.SEARLE
PROJECT NO.	021052
SPEC CODE	REC REL
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO.	90846
EFFECTIVE DATE:	

INEEL — Idaho National Engineering & Environmental Laboratory — BECHTEL BWXT IDAHO, LLC

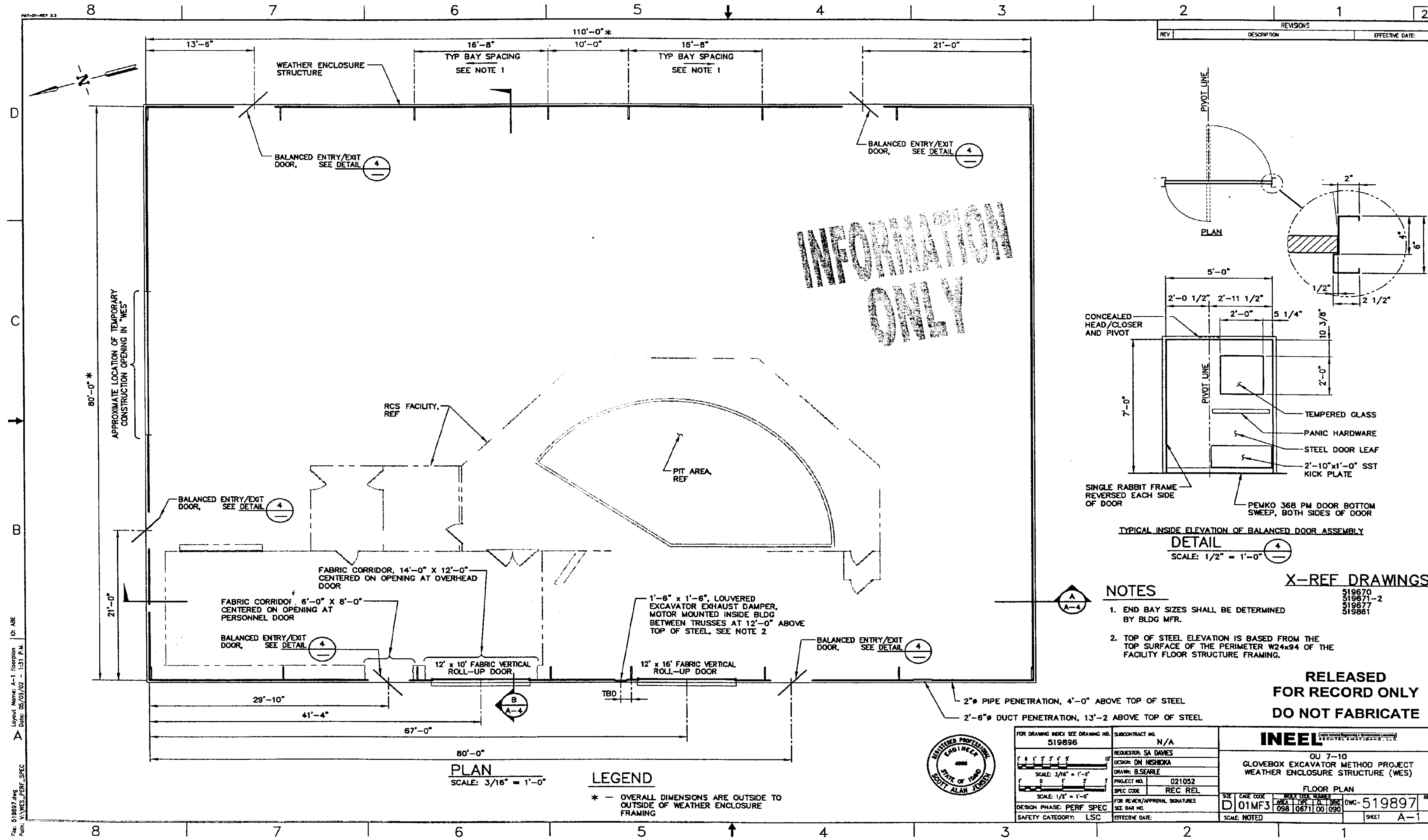
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
WEATHER ENCLOSURE STRUCTURE (WES)

SITE MAP, AREA MAP AND DRAWING INDEX

SIZE	CAGE CODE	BRICK CODE NUMBER				DWG-519896	REV
		AREA	TYPE	I.S.	DISC		
D	1MF3	098	0100	01	090		

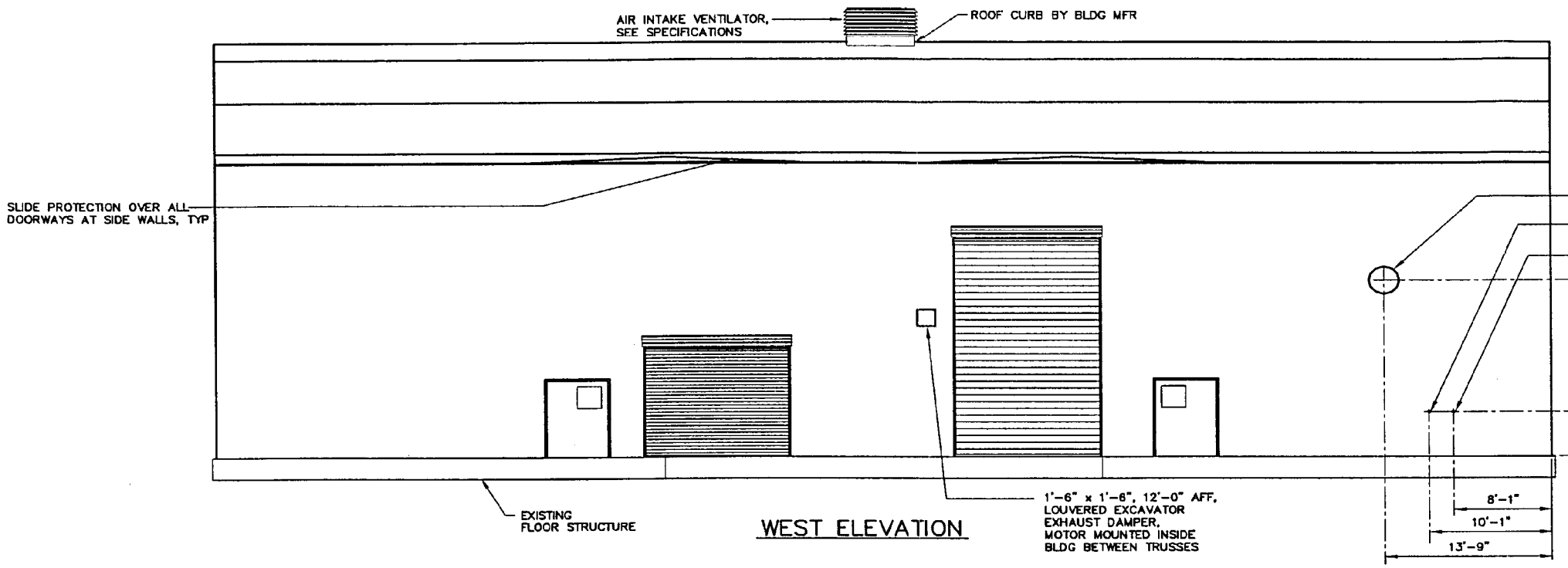
SCALE: NOTED — SHEET T-1

File: 519896.dwg Path: X:\WES_PERF_SPEC\ ID: ABE Layout Name: T-1 Date: 05/07/02 - 4:41 P.M.

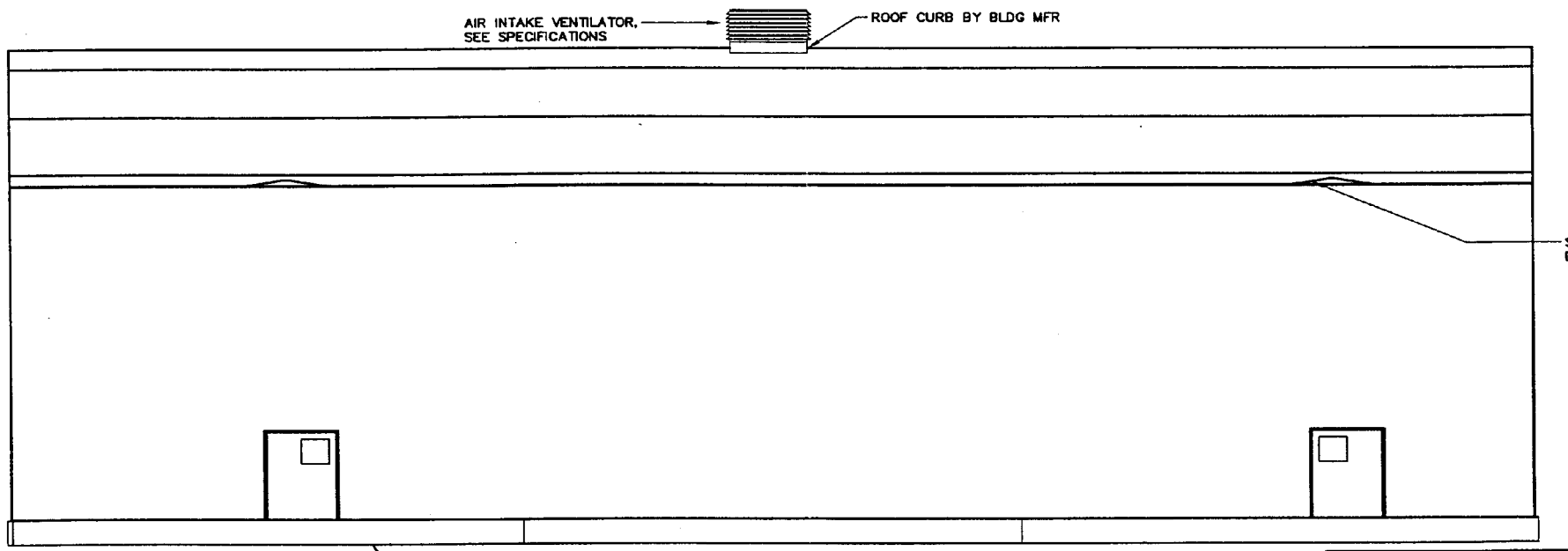


110'-0"*
13'-6"
16'-8"
TYP BAY SPACING
SEE NOTE 1
10'-0"
16'-8"
TYP BAY SPACING
SEE NOTE 1
21'-0"
WEATHER ENCLOSURE STRUCTURE
BALANCED ENTRY/EXIT DOOR, SEE DETAIL 4
INFORMATION ONLY
APPROXIMATE LOCATION OF TEMPORARY CONSTRUCTION OPENING IN "WES"
80'-0"*
RCS FACILITY, REF
PIT AREA, REF
21'-0"
FABRIC CORRIDOR, 14'-0" X 12'-0" CENTERED ON OPENING AT OVERHEAD DOOR
FABRIC CORRIDOR, 6'-0" X 8'-0" CENTERED ON OPENING AT PERSONNEL DOOR
1'-6" x 1'-6", LOUVERED EXCAVATOR EXHAUST DAMPER, MOTOR MOUNTED INSIDE BLDG BETWEEN TRUSSES AT 12'-0" ABOVE TOP OF STEEL, SEE NOTE 2
12' x 10' FABRIC VERTICAL ROLL-UP DOOR
12' x 16' FABRIC VERTICAL ROLL-UP DOOR
TBD
2"ø PIPE PENETRATION, 4'-0" ABOVE TOP OF STEEL
2'-6"ø DUCT PENETRATION, 13'-2 ABOVE TOP OF STEEL
29'-10"
41'-4"
67'-0"
80'-0"
PLAN
SCALE: 3/16" = 1'-0"
LEGEND
* — OVERALL DIMENSIONS ARE OUTSIDE TO OUTSIDE OF WEATHER ENCLOSURE FRAMING
PIVOT LINE
PLAN
2"
4"
6"
1/2"
2 1/2"
5'-0"
2'-0 1/2"
2'-11 1/2"
2'-0"
5 1/4"
10 3/8"
7'-0"
CONCEALED HEAD/CLOSER AND PIVOT
TEMPERED GLASS
PANIC HARDWARE
STEEL DOOR LEAF
2'-10"x1'-0" SST KICK PLATE
SINGLE RABBIT FRAME REVERSED EACH SIDE OF DOOR
PEMKO 368 PM DOOR BOTTOM SWEEP, BOTH SIDES OF DOOR
TYPICAL INSIDE ELEVATION OF BALANCED DOOR ASSEMBLY
DETAIL 4
SCALE: 1/2" = 1'-0"
X-REF DRAWINGS
519670
519671-2
519677
519861
NOTES
1. END BAY SIZES SHALL BE DETERMINED BY BLDG MFR.
2. TOP OF STEEL ELEVATION IS BASED FROM THE TOP SURFACE OF THE PERIMETER W24x94 OF THE FACILITY FLOOR STRUCTURE FRAMING.
RELEASED FOR RECORD ONLY
DO NOT FABRICATE
REVISIONS
REV
DESCRIPTION
EFFECTIVE DATE:
REGISTERED PROFESSIONAL ENGINEER
STATE OF IDAHO
SCOTT ALAN JENSEN
FOR DRAWING INDEX SEE DRAWING NO. 519896
SCALE: 3/16" = 1'-0"
SCALE: 1/2" = 1'-0"
DESIGN PHASE: PERF SPEC
SAFETY CATEGORY: LSC
SUBCONTRACT NO. N/A
REQUESTOR: SA DAVIES
DESIGN: DN NISHIOKA
DRAWN: B.SEARLE
PROJECT NO. 021052
SPEC CODE REC REL
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO.
EFFECTIVE DATE:
INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
WEATHER ENCLOSURE STRUCTURE (WES)
FLOOR PLAN
SIZE D
CAGE CODE 01MF3
AREA 098
TYPE 0671
DL 00
DISC 090
DWG-519897
SHEET A-1
SCALE: NOTED
File: 519897.dwg
Path: V:\WES_PERF_SPEC
Layout Name: A-1 floorplan
Date: 05/09/02 - 1:31 P.M.
ID: ABE

REV	DESCRIPTION	EFFECTIVE DATE:



WEST ELEVATION



EAST ELEVATION

INFORMATION ONLY

X-REF DRAWINGS
519670
519677

RELEASED FOR RECORD ONLY

DO NOT FABRICATE

REGISTERED PROFESSIONAL ENGINEER 4055 STATE OF IDAHO SCOTT ALAN JENSEN

FOR DRAWING INDEX SEE DRAWING NO. 519896	SUBCONTRACT NO. N/A
SCALE: 3/16" = 1'-0"	REQUESTER: SA DAVIES
	DESIGN: DN NISHIOKA
	DRAWN: B.SEARLE
	PROJECT NO. 021052
	SPEC CODE: REC REL
DESIGN PHASE: PERF SPEC	FOR REVIEW/APPROVAL SIGNATURES SEE DWR NO. 90646
SAFETY CATEGORY: LSC	EFFECTIVE DATE:

INEEL

OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
WEATHER ENCLOSURE STRUCTURE (WES)

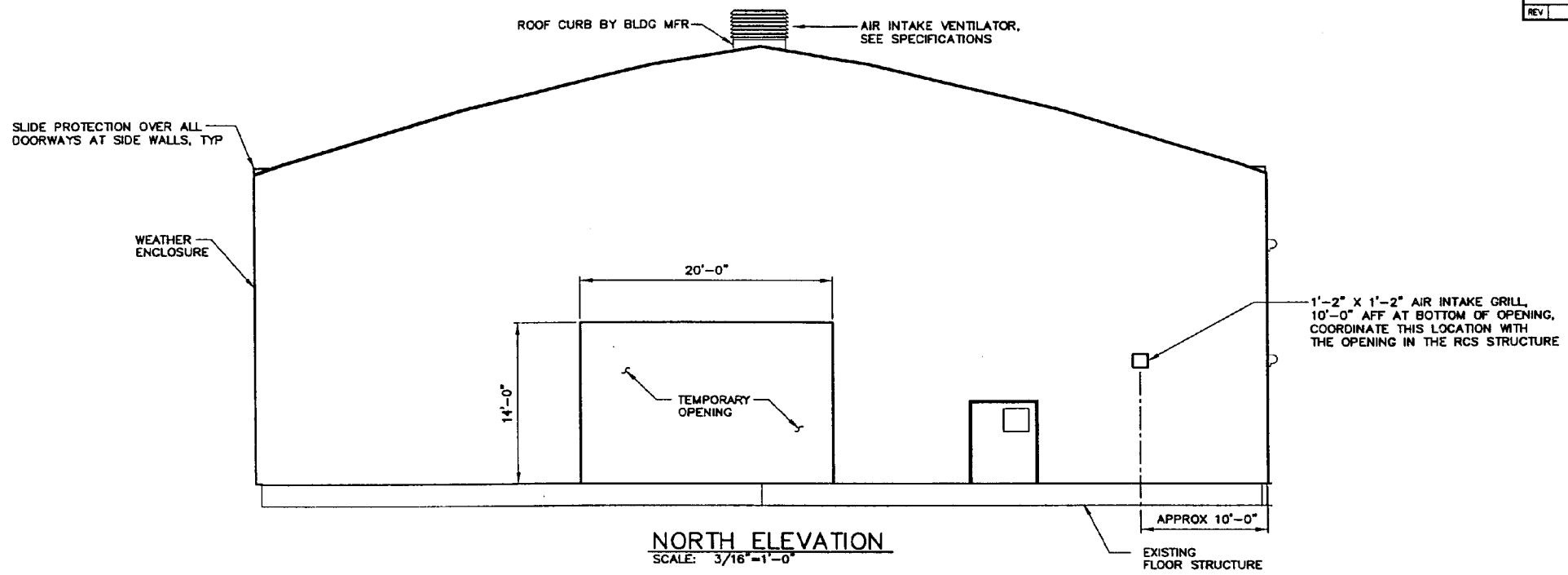
ELEVATIONS

SIZE	CAGE CODE	PROJECT CODE NUMBER				DWG-	REV
		AREA	TYPE	SI	DISC		
D	01MF3	098	0671	00	090	519898	

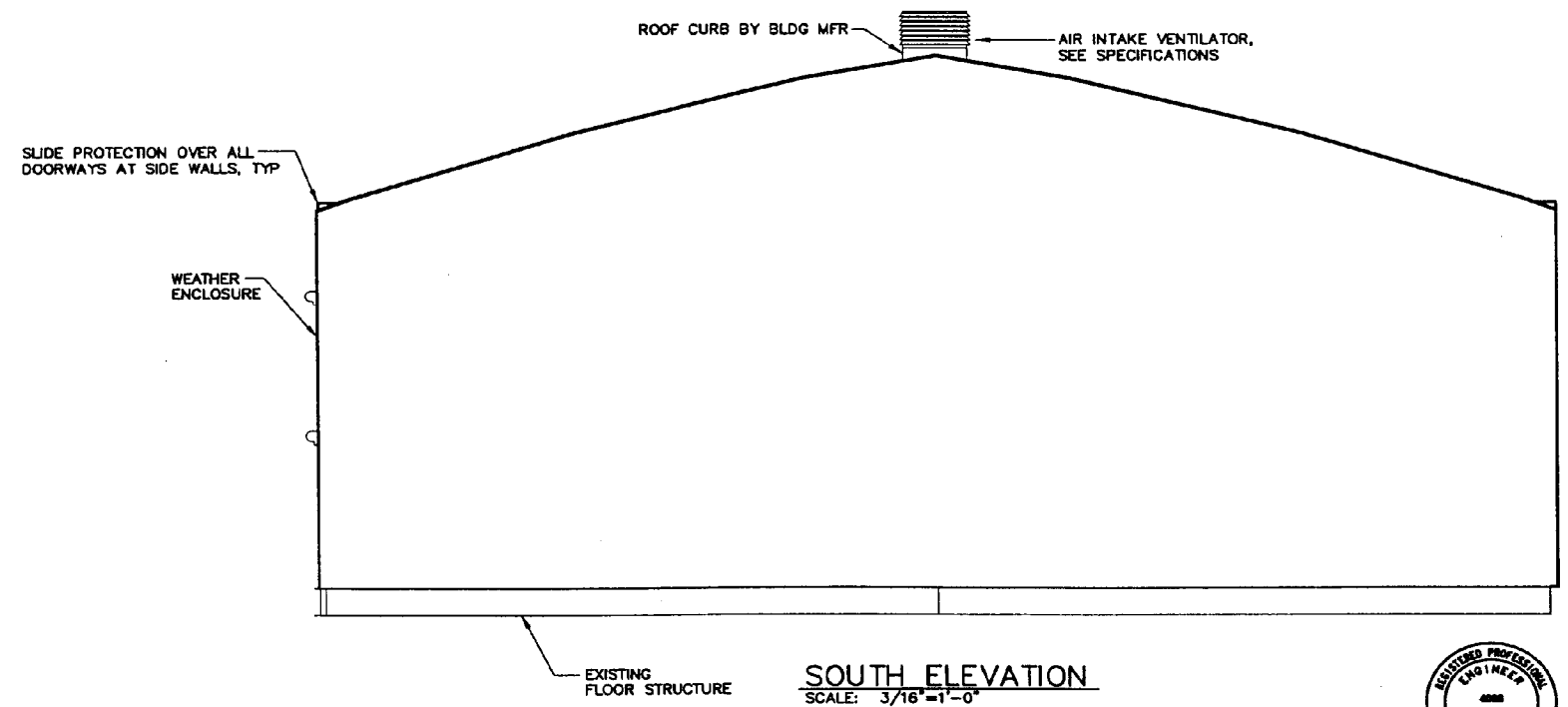
SCALE: 3/16" = 1'-0" SHEET A-2

Layout Name: A-2 ELEVATIONS | ID: ABE
Date: 05/09/02 - 1:22 PM
File: 519898.dwg
Path: V:\WES_PERF_SPEC

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE:



NORTH ELEVATION
SCALE: 3/16"=1'-0"



SOUTH ELEVATION
SCALE: 3/16"=1'-0"

INFORMATION ONLY

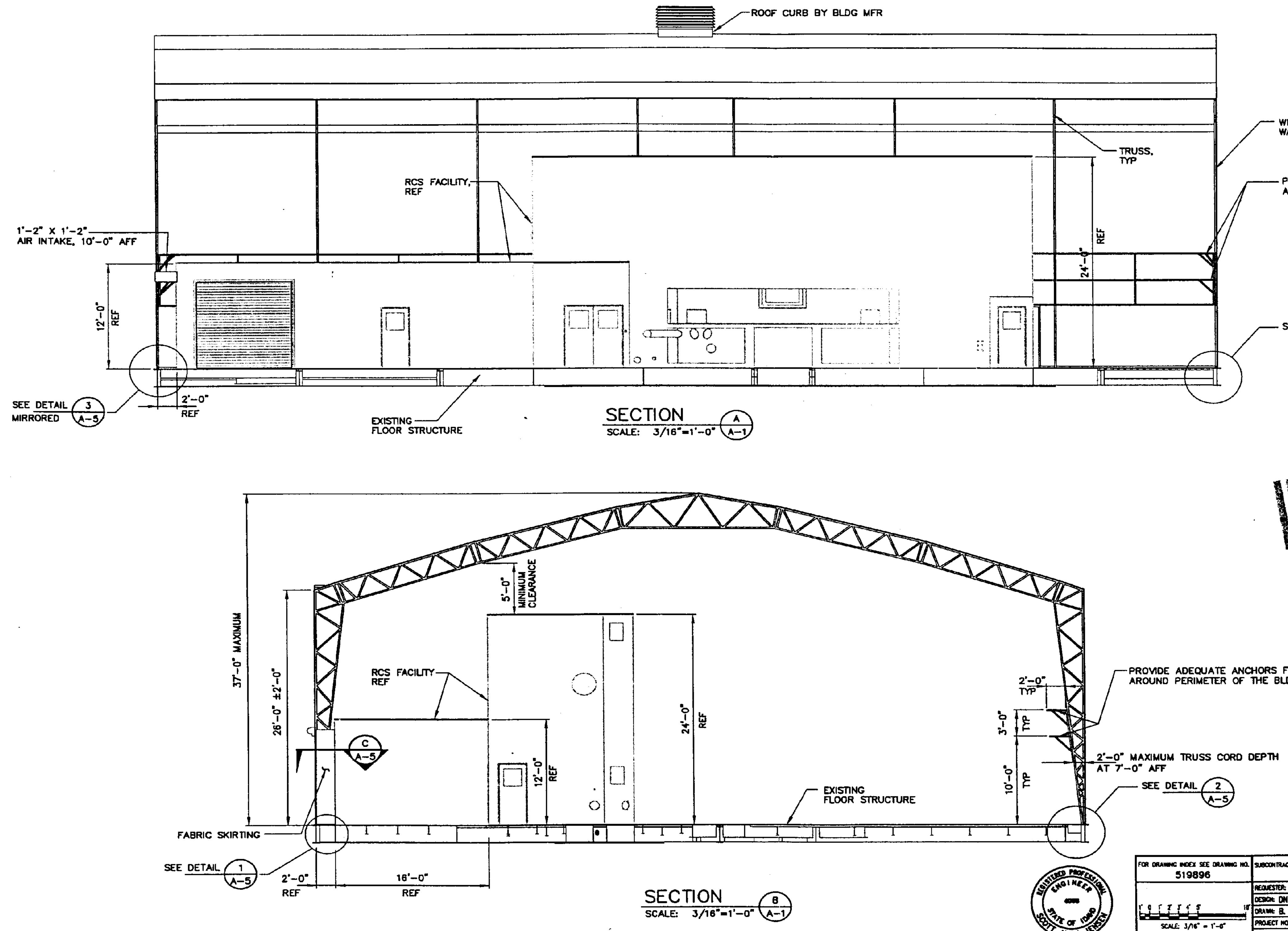
X-REF DRAWINGS
519670
519677

RELEASED FOR RECORD ONLY
DO NOT FABRICATE

REGISTERED PROFESSIONAL ENGINEER — STATE OF IDAHO — SCOTT ALAN JENSEN

FOR DRAWING INDEX SEE DRAWING NO. 519896	SUBCONTRACT NO. N/A	INEEL — BECHTEL BWXT IDAHO, LLC
SCALE: 3/16" = 1'-0"	REQUESTER: SA DAVIES	OU 7-10 GLOVEBOX EXCAVATOR METHOD PROJECT WEATHER ENCLOSURE STRUCTURE (WES)
	DESIGN: DN NISHIOKA	
	DRAWN: B.SEARLE	ELEVATIONS
	PROJECT NO. 021052	
	SPEC CODE REC REL	
DESIGN PHASE: PERF SPEC	FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90846	CAGE CODE 01MF3 — WORK ORDER NUMBER AREA 098 TYPE 0671 QL 00 ORG 090 — DWG- 519899 REV
SAFETY CATEGORY: LSC	EFFECTIVE DATE:	SCALE: 3/16" = 1'-0" — SHEET A-3

File: 519899.dwg
Path: V:\WES_PERF_SPEC
Layout Name: A-3 ELEVATIONS (B) ASE
Date: 05/09/02 - 1:19 P.M.



INFORMATION ONLY

X-REF DRAWINGS

519870
519671-2
519677
519861

RELEASED FOR RECORD ONLY

DO NOT FABRICATE

REV	DESCRIPTION	EFFECTIVE DATE:
REVISIONS		

FOR DRAWING INDEX SEE DRAWING NO.	519896
SCALE: 3/16" = 1'-0"	
DESIGN PHASE:	PERF SPEC
SAFETY CATEGORY:	LSC
SUBCONTRACT NO.	N/A
REQUESTER:	SA DAVIES
DESIGN:	DN NISHIOKA
DRAWN:	B. SEARLE
PROJECT NO.	021052
SPEC CODE	REC REL
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO.	90846
EFFECTIVE DATE:	

REGISTERED PROFESSIONAL ENGINEER — STATE OF IDAHO — SCOTT ALAN JENSEN

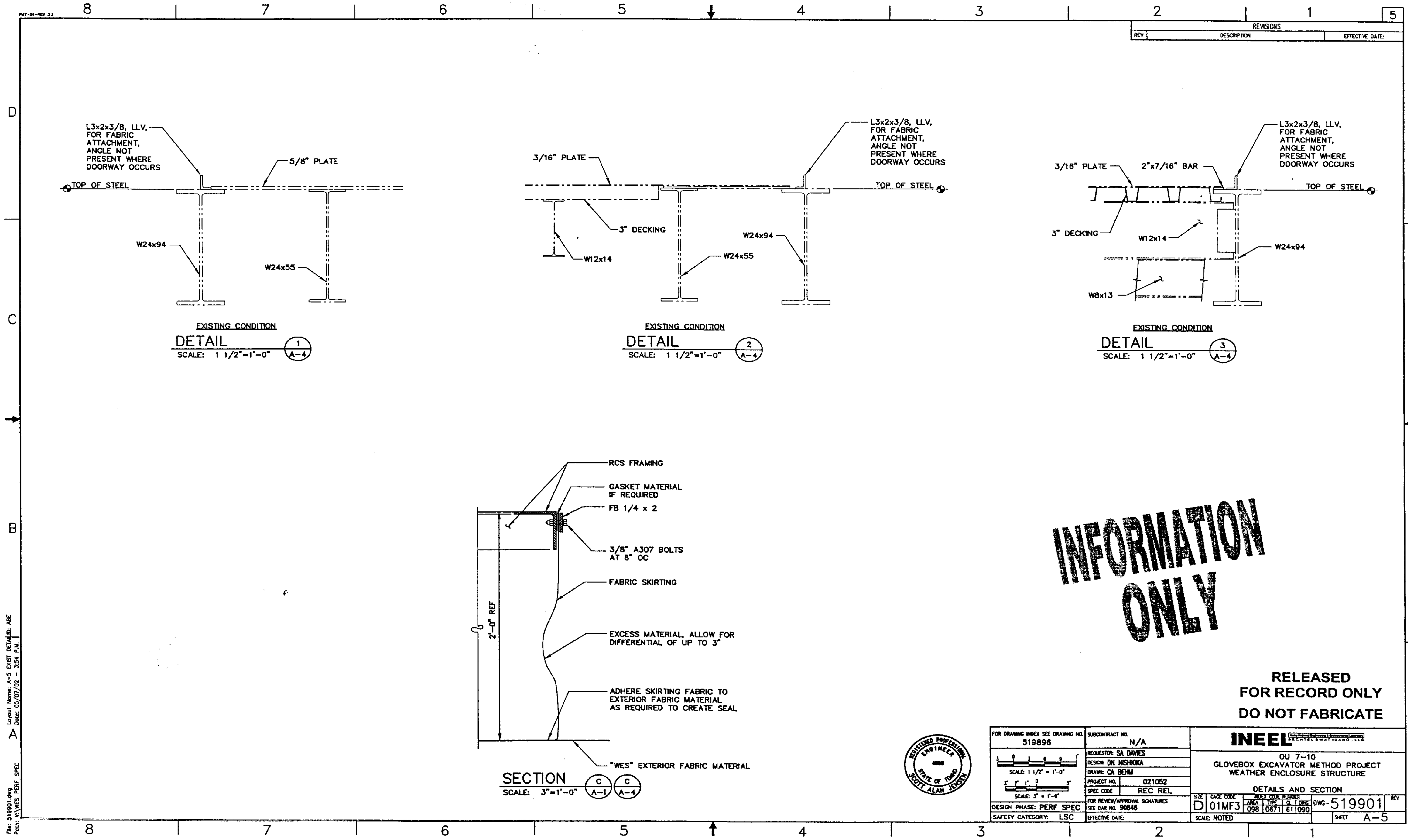
INEEL

OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
WEATHER ENCLOSURE STRUCTURE (WES)
SECTIONS

SIZE	CAGE CODE	AREA	TYPE	CL	OBSC	DWG-	REV
D	01MF3	098	0671	00	090	519900	

SCALE: 3/16" = 1'-0" SHEET A-4

File: 519900.dwg Path: V:\WES_PERF_SPEC
Layout Name: A-4 SECTIONS | ID: ABE
Date: 05/07/02 - 4:38 P.M.


L3x2x3/8, LLV, FOR FABRIC ATTACHMENT, ANGLE NOT PRESENT WHERE DOORWAY OCCURS
5/8" PLATE
TOP OF STEEL
W24x94
W24x55
EXISTING CONDITION
DETAIL 1 A-4
SCALE: 1 1/2"=1'-0"
3/16" PLATE
3" DECKING
W12x14
W24x55
W24x94
L3x2x3/8, LLV, FOR FABRIC ATTACHMENT, ANGLE NOT PRESENT WHERE DOORWAY OCCURS
TOP OF STEEL
EXISTING CONDITION
DETAIL 2 A-4
SCALE: 1 1/2"=1'-0"
3/16" PLATE
2"x7/16" BAR
L3x2x3/8, LLV, FOR FABRIC ATTACHMENT, ANGLE NOT PRESENT WHERE DOORWAY OCCURS
TOP OF STEEL
3" DECKING
W12x14
W24x94
W8x13
EXISTING CONDITION
DETAIL 3 A-4
SCALE: 1 1/2"=1'-0"
RCS FRAMING
GASKET MATERIAL IF REQUIRED
FB 1/4 x 2
3/8" A307 BOLTS AT 8" OC
FABRIC SKIRTING
EXCESS MATERIAL, ALLOW FOR DIFFERENTIAL OF UP TO 3"
ADHERE SKIRTING FABRIC TO EXTERIOR FABRIC MATERIAL AS REQUIRED TO CREATE SEAL
"WES" EXTERIOR FABRIC MATERIAL
2'-0" REF
SECTION C A-1 C A-4
SCALE: 3"=1'-0"
INFORMATION ONLY
RELEASED
FOR RECORD ONLY
DO NOT FABRICATE
REVISIONS
REV
DESCRIPTION
EFFECTIVE DATE:
FOR DRAWING INDEX SEE DRAWING NO. 519896
SCALE: 1 1/2" = 1'-0"
SCALE: 3" = 1'-0"
DESIGN PHASE: PERF SPEC
SAFETY CATEGORY: LSC
SUBCONTRACT NO. N/A
REQUESTER: SA DAVIES
DESIGN: DN NISHIOKA
DRAWN: CA BEHM
PROJECT NO. 021052
SPEC CODE REC REL
FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO. 90846
EFFECTIVE DATE:
INEEL
OU 7-10
GLOVEBOX EXCAVATOR METHOD PROJECT
WEATHER ENCLOSURE STRUCTURE
DETAILS AND SECTION
SIZE D
CAGE CODE 01MF3
INDEX CODE NUMBER AREA 098 TYPE 0671 CL 61 DRG 090
DWG-519901
REV
SCALE: NOTED
SHEET A-5
REGISTERED PROFESSIONAL ENGINEER STATE OF IDAHO SCOTT ALAN JENSEN
File: 519901.dwg
Path: V:\WES_PERF_SPEC
Layout Name: A-5 EXIST DETAILED: ABE
Date: 05/07/02 - 3:54 P.M.
5